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ABSTRACT

This monograph outlines a philosophy and method for master planning of higher education facilities. It is intended to provide facilities personnel with guidelines for establishing a successful planning process. The guide provides practical advice, including worksheets that can be used to identify issues and requirements. Included are examples of master plans, including scope, budget, and time comparisons. The rationale for a master plan is explained with a detailed outline of the process for developing a plan. Planning steps include determining objectives, identifying available information and resources, determining the scope of the plan, and creating a system for plan administration. The process of determining the need for consultants and obtaining qualified ones is also detailed as is the process of evaluating responses to a request for proposals for professional services. The final section examines the need for periodic review and evaluation of the master plan. (Contains 100 references.) (JLS)

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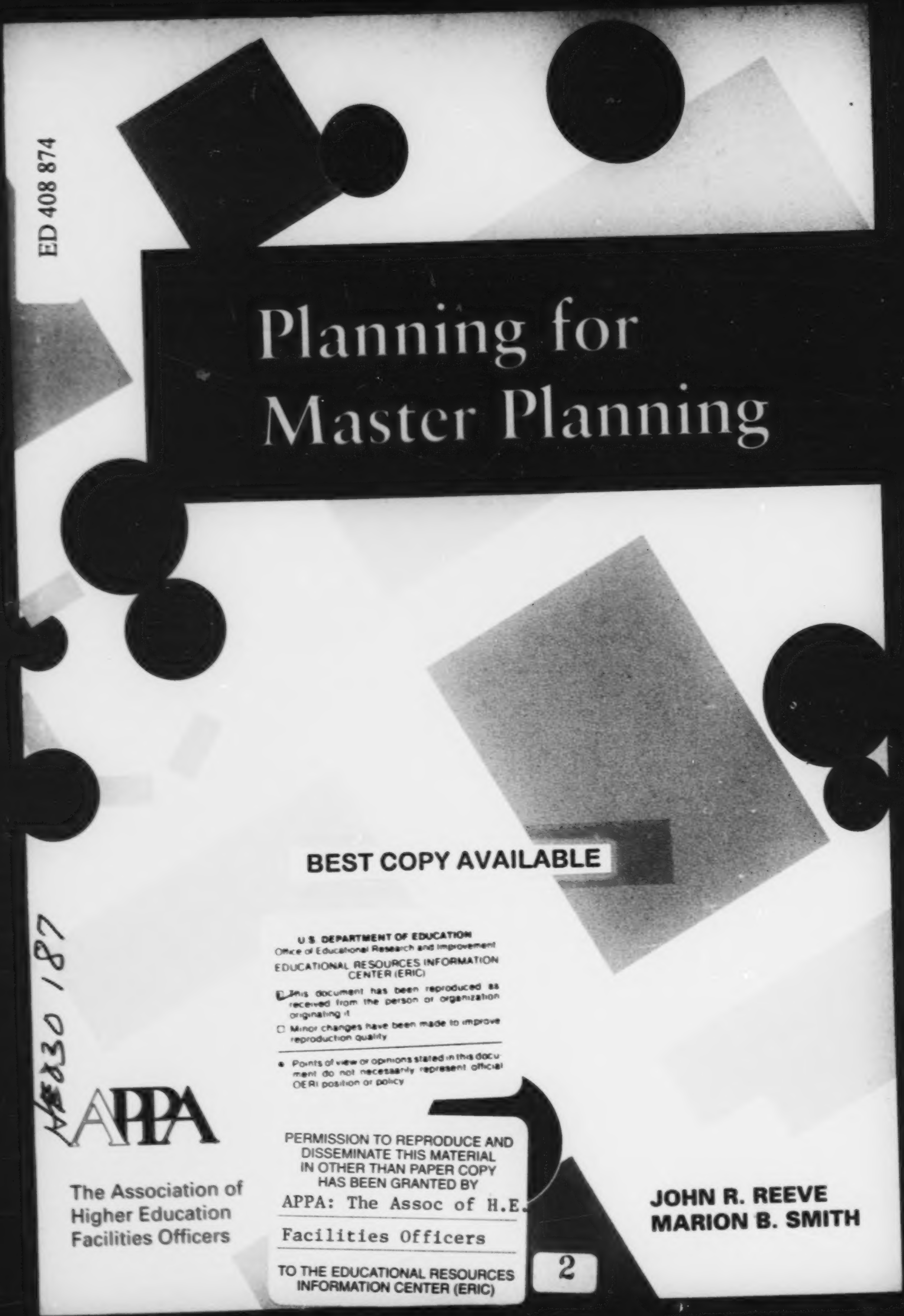

Planning for Master Planning

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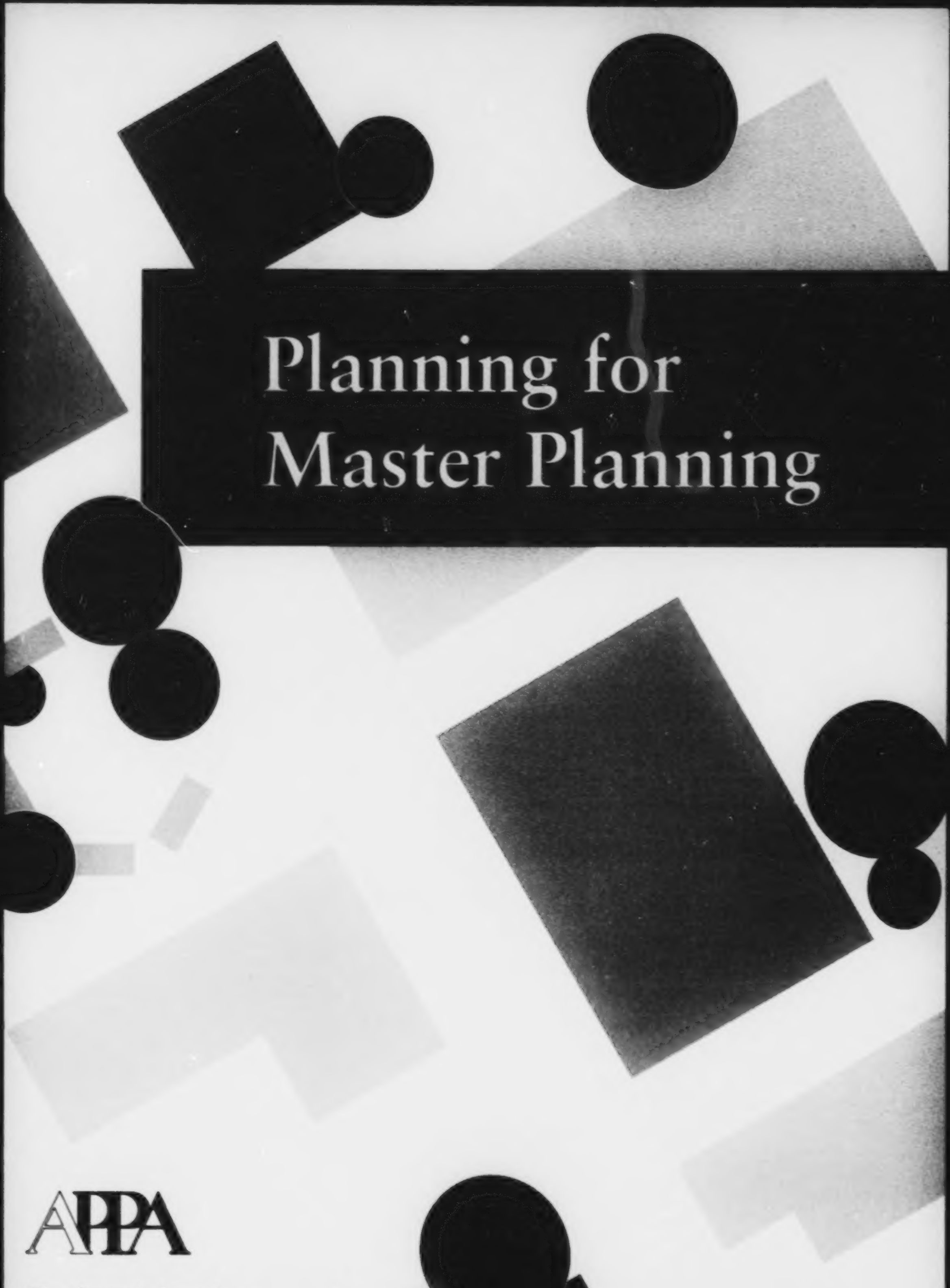

Planning for Master Planning

APPA

The Association of
Higher Education
Facilities Officers

JOHN R. REEVE
MARION B. SMITH

The concepts and guidelines presented in this book are intended to assist facilities administrators to prepare for a master planning effort. The opinions expressed in this book are those of the authors and do not necessarily reflect the opinions of APPA.

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Medea Ranck, of the APPA staff, designed the book and handled all production details. Steve Glazner provided guidance and editorial support.

The importance of master planning is widely recognized among higher education institutions today. A good master plan is the means by which the facilities fulfill the mission, by linking an institution's vision with its physical campus. It is critical to recognize the many steps you need to take before you actually "begin" the master planning effort. *Planning for Master Planning* provides the useful guidelines you need to follow as you take those steps forward. We wish you and your institution great success as you prepare for your master plan.

FOREWORD

Instituting a planning program is not a simple process. College and university facilities administrators continue to grow weary and frustrated over the difficulties they encounter when setting out to undertake any new physical planning program.

Many barriers exist to retard any forward progress that might have developed. While some of these barriers are controllable, others are not. However, a planning program will never become a reality until each of these barriers has been overcome.

Master planning has enjoyed a growing reputation as a useful management tool for decades now, but the philosophy and methods of planning are not fully understood by those responsible for implementing it. Master planning has thus proven difficult for many administrators. Some have expressed disappointment in the usefulness of master plan products, while others have noted a tendency for their institutions to drift from the plan after the formal process is complete.

There is a clear need to raise the level of understanding about master planning, and to help facilities administrators form realistic expectations about what to expect from a master plan among a university's leadership team.

In 1993, the Christner Partnership conducted a survey, "Planning for Master Planning," among a representative sample of APPA members. The survey garnered a very high return rate of 50 percent. This survey will be referred to periodically throughout the monograph. The purpose of the survey was to gather opinions about what issues should be considered and what activities need to take place in order to successfully launch an effective master planning process.

Along with other research, the information and topics of concern collected became the basis for a follow-up session. A "Planning for Master Planning" workshop, sponsored by APPA, was held in St. Louis in March 1994, and in Indianapolis in March 1995.

This monograph documents these efforts and our continuing interest in developing effective master planning processes for colleges and universities. *Planning for Master Planning* is designed to serve as a master planning guidebook for facilities administrators.

The objective of this monograph is to outline a philosophy for planning and a method for how to approach master planning. The monograph should provide facilities personnel with guidelines for establishing a successful process. The text gives practical advice, complete with worksheets that can be used to identify issues and requirements early on. The monograph includes several examples of master plans, complete with scope, budget, and time comparisons.

Planning for Master Planning will provide you with the information and tools you need to launch a successful master planning process and keep it on track.

INTRODUCTION

Colleges and universities can no longer afford simply to react to changes in society. Institutions that will thrive and prosper in the twenty-first century will be those able to anticipate change, redefine themselves, and align their facilities assets to support their strategic goals.

All this must be accomplished in a logical sequence and within an ever-diminishing time frame. A good master plan derived from a sound master planning process is essential to achieve these objectives. But what exactly is master planning, and how does a college initiate a process that will ensure effectiveness?

A well-conceived master plan creates a clear and precise vision of where the institution should go and how it should get there, ensuring that individual projects will fit properly into the whole overall institutional vision. In simple terms, master plans allow a reasonable anticipation of what is going to happen.

Master plans come in a variety of forms. They can deal with a broad overview of the campus, focusing on facility and site development. Or they can look at specific factors in detail, such as compliance with governmental mandates or where to plant new trees. Regardless of the particular focus, all master plans share certain fundamental characteristics that shape the dynamics of the process and ultimately determine their usefulness.

- To ensure that your facilities suppport your ***strategic plan.***
- To create ***a shared vision*** within your insitution
- To make ***better use of your existing*** site and facilities
- To ***anticipate*** your future site and facility needs
- To ***avoid waste and disruption*** resutling from piecemeal projects.
- To ***establish a realistic schedule and capital budget***
- To ***unify the aesthetic*** asset of your campus
- To ***enhance credbility*** with lending isntitutions
- To develop campus maps and building plans for ***facility management***
- To focus and energize your ***fundraising and development*** efforts.

The benefits of master planning.

WHY MASTER PLANNING IS IMPORTANT

Master planning as a professional discipline is fairly new; however, the idea of "planning ahead" is a basic human characteristic. The Romans may have been the first to use a precursor of what is referred to today as master planning. Known for their competence in the development of cities and roads, the Romans used a systematic mapping process to plan and design a regional infrastructure. Archaeological research of built environments reveals even earlier evidence of planned development.

More recently, formal master planning has been a part of university design in the United States for at least two centuries. Thomas Jefferson's plan for the University of Virginia is a widely known and often imitated example. And yet to this day it is not uncommon for architectural services to be rendered for a particular project without anticipating plans for any future facilities.

Such decisions are short-sighted, looking only for an immediate solution to an immediate problem and giving little consideration to the ramifications of these decisions. Development projects don't take place in a vacuum. This is where a master plan's benefit is most apparent.

Management guru Peter Drucker offered this remark about planning: "Long-range planning does not deal with future decisions, but with the future of present decisions." Put another way, it is what is done today that shapes tomorrow. But how can that "future of present decisions" be rationally considered?

To start with, there must be a vision of where the institution is headed. To paraphrase the Cheshire Cat in *Alice in Wonderland*, "When you don't know where you're going, any road will get you there." An effective master planning process, on the other hand, involves making decisions about how to get to where you want to go. The institution's strategic plan is critical in establishing the framework for the master plan because it answers the question of "where do you want to go?" The master plan must anticipate the future by considering facility needs generated by the college's mission statement, strategic plan, and corresponding academic program.

If a master plan responds only to existing programs and existing buildings, it reacts only to the status quo rather than anticipating what the college wants to be and how it must change to get there. This approach is analogous to trying to drive a car while looking only through the rearview mirror.

■ PLANNING FOR LIMITED RESOURCES

After an era of unprecedented growth from about 1950 to around 1975, colleges and universities are contending for a smaller cohort of potential students. Budgets and state aid are also being pinched as both public and private schools seek to do more with less.

These two factors may be regarded as arguments against conducting a master plan, but reductions in both enrollment and funding can lead to new circumstances requiring more, not less, planning. An institution's administrators must learn how to manage not only growth but also shrinkage, with implications for campus facilities in both circumstances.

Declining enrollment and tightening of other funding sources place administrators in a difficult situation. They have fewer dollars to work with, but still must position their schools strategically to compete for a smaller pool of potential students.

In a 1992 survey of members of the Central Association of Physical Plant Administrators (CAPPA), 31 of 52 respondents indicated that their institutions had developed a master plan between 1990 and 1992. Twenty-one other plans were scattered between 1966 and 1989, and one institution reported that it had not conducted a master plan since 1910. A 1993 survey of APPA members revealed a similar pattern. These responses suggest that increased competition for students and funding has made master planning a very popular undertaking in the 1990s.

Colleges and universities today are attempting to attract students by a variety of means, including physical improvements. Also, as the number of traditional college-age students has declined, many institutions have turned their focus to recruiting nontraditional students.

Without a master plan, colleges run the risk of building unnecessary additions or expansions and duplicating infrastructure and systems. Projects are sometimes undertaken to satisfy an immediate need, ultimately proving the old adage that "haste makes waste." A master plan enables colleges to use capital funds more efficiently by ensuring that facilities are employed in support of the institution's strategic goals, not as a result of happenstance.

College administrators are increasingly being held to a smaller margin of error. Mistakes are unaffordable. Projects must be right the first time. Moreover, projects that are smaller to begin with must allow for future expansion as funding becomes available. One of the most useful outcomes of a master plan for a college on a tight budget is that capital funding is able to be used in a more efficient manner.

A master plan provides a system for assessing each new project in the context of a well-thought-out campus development strategy. A master plan contributes to the evolution of the campus by identifying enrollment, program and development trends and addressing issues related to those trends.

VARIATIONS ON A PLANNING THEME

A master plan must be tailored to each school's unique situation. Every institution has its own personality and the planning process must respond to that uniqueness. Therefore, there is no such thing as a uniform master planning procedure that can be applied to every campus.

While master plans are not often labeled as being of a specific type, they can be classified as broad or narrow in focus. Will the plan apply to the whole campus or a narrower area such as landscaping? There may be legitimate reasons for an institution to have a landscaping master plan or an interior master plan without having a campus-wide master plan. However, before undertaking a limited-scope master plan, administrators should consider all aspects of the campus and its buildings including parking, and building systems.

Some different types of master plans are:

- Comprehensive campus and facilities plans, an in-depth process that examines the campus from a wide variety of standpoints.
- Campus and facilities plans that do not go into the depth of a comprehensive process. Areas such as parking, building systems, accessibility, or hazardous materials may have been covered by previous (or concurrent) studies.
- Master plans of specific components, such as landscaping, space utilization, circulation, or a specific subset of a campus, such as a medical school.

Determining what type of master plan to pursue depends upon how the document will be used, a decision that should be governed by the institution's strategic goals.

A master plan, whether broad or narrow, must possess certain characteristics, such as acknowledgment of a mission statement, and guidelines for future development taking into account academic programs, space needs, site analysis, facility inventory, and land use. If most of these issues are not addressed in the process, then the outcome will not be a true ***master*** plan.

■ PRESIDENTIAL PREROGATIVE

The present popularity of master plans is attributable in part to increased interest by college and university presidents. In some cases, issues such as the need to replace major buildings trigger the recognition that it is time for a major review of the campus. In other cases, a new president may want to restate or redefine the vision of the institution itself, which can lead to a master planning process.

In the APPA survey, more than one fourth of the respondents said their master plan was a direct result of a change in leadership. Conversely, while a master plan can be spearheaded by new leadership, survey respondents identified ***lack of leadership support*** as their main obstacle when asked why a plan has not been conducted. It can be inferred from this fact that a master plan must at least have the support of a chief executive, even if not initiated by that person.

Many states, Texas and North Dakota for example, now require master plans for public higher education institutions. This trend toward legislative mandates is likely to continue as other states recognize the political value of planning facilities improvements more comprehensively.

The philosophy behind these regulations is clear. State legislators want to be assured that taxpayer money is being spent efficiently by all institutions that receive state funding. Most states having such regulations require a master plan to be in place before spending allocations for specific projects will be considered. In this context, the master plan represents a commitment to a well-planned, systematic approach to future development.

COMMUNITY CONTEXT FOR PLANNING LEGISLATIVE MANDATES

Another motivation underlying some master plans is protection or enhancement of the community in which the institution is located. A college's surroundings can be supportive of an institution's mission and goals if those goals are spelled out clearly in a master plan. On the other hand, institutions that are secretive about their building projects and expansion (or contraction) plans can foment strained relations with neighbors. Accusations of reduced property value and increased crime are the fruit of bad community relations.

College campuses can have both positive and negative impacts on their surrounding communities and administrators need to consider how their plans will impact their neighbors. A master planning process can allow constituent groups to have a say in an institution's future directions. City officials also need to be included in the process. By bringing individual concerns to the table and accomplishing goals through combined effort, city and college can create true synergies in outcomes that are mutually beneficial.

Community involvement in master planning may raise issues such as getting greater use out of facilities by opening them to the community (e.g. sharing space with local school districts), developing new research parks or working cooperatively with local businesses to further the education of their employees. A master plan can help clarify the boundaries of a campus by identifying both planned acquisition and disposal of property.

OTHER ISSUES

Facilities administrators naturally have their own needs and goals in terms of their institution's physical plant. They know, in a very practical sense, what is needed and how it can be accomplished. By participating in an effective, successful master plan, facility managers may need to adjust their perspective, recognizing that the master plan encompasses more issues than just those pertaining to facilities. The college's overall mission, academic program and strategic plan must also be taken into consideration.

Completing a master plan requires a variety of professional and managerial skills within an integrated team. In most cases, hiring a master planning consultant to lead the process provides a number of benefits. Among these are professional objectivity and the knowledge of trends and effective actions that comes from having worked on many campuses. A facilities administrator should be one of the key members of the team and in most cases will be the coordinator for the process.

The resulting master plan can become a facilities administrator's best friend, making their job easier by defining priorities and synchronizing with funding mechanisms and cycles. A thorough master plan will provide the institution with cost and time estimates, as well as clear direction to ensure that everyone who uses the master plan is progressing toward the same clearly defined goals.

This monograph has been developed to take the reader step by step through the process of planning for master planning and to explain how best to approach each part of the process. To that end, a number of worksheets have been designed to help the facilities administrator get the master planning process started. By reviewing an initial draft of these worksheets with appropriate members of his or her administration, decisions can be made about how the master plan should address their campus's particular issues. Each worksheet is referred to in relevant sections of the text, and includes instructions to aid in compiling needed information. It is hoped that this monograph and the accompanying worksheets will give facilities administrators a powerful boost in launching a successful master planning process.

Section I:
What Is Master Planning?

1. DEFINING MASTER PLANNING

Master Planning is an analytical and creative activity that results in a coordinated set of decisions (the plan) about actions to be taken to accomplish stated goals.

■ PURPOSE OF MASTER PLANNING

Planning is a common activity in all aspects of daily life. Individuals plan workdays and family vacations. Organizations plan strategic directions and conform to regular cycles of budget planning. But, despite familiarity with the concept of planning, the discipline of planning is rarely understood.

Planning is a purposeful activity to shape the future in the context of clear goals. This concept has many applications to human endeavors and is extremely effective when applied to institutions through the tool of master planning. Good planning can harness the energies of an organization en route to accomplishing amazing feats.

A master plan is equally useful as a guide for future development and as a schedule for capital budget projections. It is also a vehicle for making management decisions about facilities, resources, and time. Some APPA survey respondents recognized

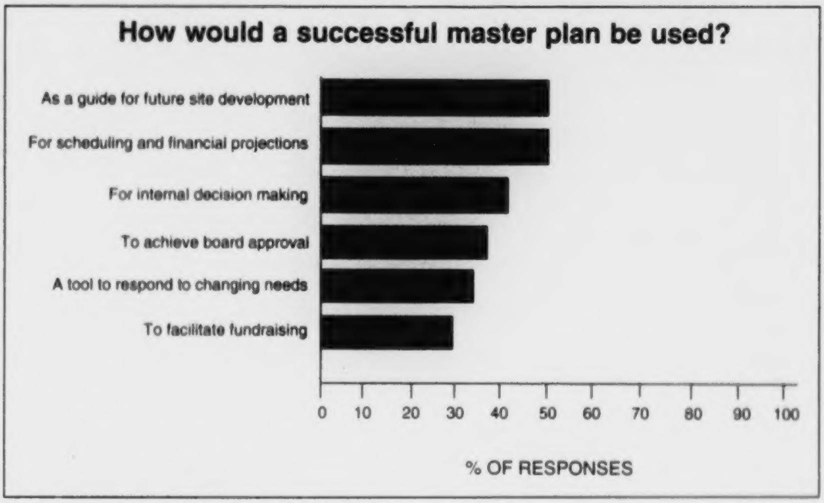

Figure 1.1. Uses of a master plan.

a master plan as simply a means to an end, that of achieving board approval for projects (see Figure 1.1).

The keys to a successful planning process are to set realistic expectations and provide adequate resources for activities within the process. The first step is to identify the driving needs for the master plan in order to define the goals of the process. In effect, step one is to determine what this effort needs to accomplish. Will it be an in-house document consulted only by administrative and facilities staff? Or will it be used to communicate the vision of the campus to a wider community? Will it be used to guide future construction? Will development staff make use of it in fund raising? In many cases, all the above drivers are present to one degree or another.

Clear decisions about the possible uses of the master plan will guide later decisions about the products generated by the process.

■ REASONS FOR PLANNING

Reasons for undertaking a campus master plan are usually varied, covering guidelines for future development, changes in the market, and internal competition for funding. For every master plan there are different driving forces that trigger the process.

A master plan is often prompted by the need for clear answers to specific questions such as, "Where are we going to put the new library?" or "What potential does this parcel of land have for our future?"

Whatever the immediate reason, a sound master planning process can turn that need into an opportunity. For example, it may be possible to incorporate a new chiller loop into upcoming building projects and so improve overall campus infrastructure as well as create efficiencies with long-term cost benefits.

Once the motivations for planning are formally recognized, specific outcomes for the planning process can be defined, and the process, tasks, and necessary services will become more evident.

Fiscal Prudence

Today, resources at all institutions are stretched thin, so colleges are less able to absorb the consequences of errors in decisions about facilities. Things must be done right the first time, because mistakes can beget a legacy of financial drain for years into the future. The master plan helps ensure that projects are not only done right the first time, but that future projects follow a logical and systematic development plan.

By following a master plan, facilities administrators can have confidence that they will not be compromising future facilities as they construct projects to address immediate needs. This, in turn, guarantees that the institution is getting value for its money, an issue of great interest to both current and potential funding sources. Legislators want to be assured that taxpayer money is being spent efficiently, and a master plan documents a school's commitment to a well-planned, systematic approach to future development. Some states now require master plans before releasing funding for capital projects.

Defining Proposed Facilities

Universities anticipating change should use a master plan to define the location, scope, and character of proposed facilities. Knowing what facilities are needed and where they should be located can make a significant difference when it comes time to plan the next project. Also, prospective funding sources are more inclined to support expansion if there is a coherent plan in place that covers both present and future needs.

Master plans err when they become too explicit with respect to new facilities. A master plan containing floor plans of proposed buildings risks being seen as a document that seeks to justify a preconceived idea, rather than being a guide to the future. Master plans that go beyond project scope, location, and character are not a helpful prelude to architectural design; rather, they preempt the design process that logically follows the master plan.

Redefining Image

Many institutions today are attempting to improve their competitive situation and attract more students by redefining their image, both in terms of reputation and physical appearance. Image improvement may be as simple as a new signage program, or as extensive as constructing a new college from scratch. In all cases, master planning increases the success of these efforts by facilitating a process through which the institution addresses specific goals.

An institution's appearance is one of the most important factors a prospective student considers when deciding upon which university to attend. First impressions of a campus are often the only impressions a potential student uses to decide which institution to attend.

Planning this image requires the institution to identify the target audience and then express an image that will appeal to these prospects. A master plan can be used to help identify these physical characteristics.

The impression that the campus makes on new students is also extremely important to the process of bonding emotionally with the campus, and translates over time into a powerful feeling of attachment on the part of alumni. Campus attributes, including landscaping, exterior and interior spaces, and historic buildings are a legacy—a physical tradition. The master plan should seek to preserve and enhance this legacy. Alumni are a major source of revenue for most schools, and the campus should evoke fond memories of the days when they were undergraduates.

ISSUES DRIVING MASTER PLANS

What inspires an institution to embark on a master planning process? Master plans do not just happen. They are typically generated to address both present and future needs of an institution. In many cases master plans are driven by factors such as enrollment changes or anticipation of facility expansion or property acquisition, but their usefulness extends beyond simply responding to these types of issues.

In our survey of APPA members, facilities administrators were asked what issues a successful master plan should address (see Figure 1.2). The survey listed eight possible areas of concern and asked the managers to rank them in order of importance. An overwhelming number ranked long-range planning as the most important issue to be addressed by the master plan. The responses, in order of importance, were:

- academic mission
- infrastructure analysis
- development guidelines
- implementation strategies
- site acquisition strategies
- accessibility analysis
- fund raising strategies

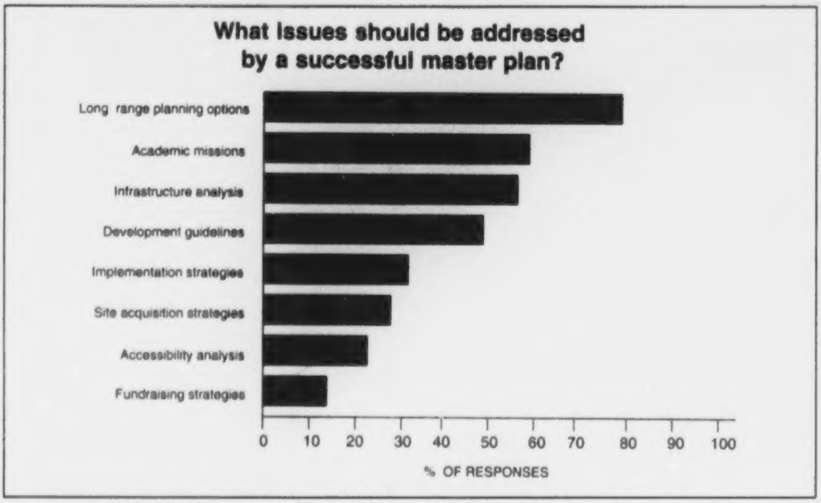

Figure 1.2. Issues addressed by a master plan.

Bear in mind that this survey sampled the view of a particular constituency (facilities administrators) who perceived the need to identify long-range options as the most important issue. Different constituent groups are likely to have different views of what is most important.

If the same question were asked of development directors, for example, they might respond that fund-raising strategies are the most important—the factor ranked lowest by APPA members. It is important to recognize that these differing perspectives exist, then factor that knowledge into the approach to communicating the benefits of the master planning process.

A planning process is most often driven by changing strategic goals that usually derive from changes in the institution's competitive environment. This is especially true in the case of colleges that have not previously conducted a planning process and are not in the habit of regularly reviewing their strategic assumptions.

Priorities and development concepts may linger from previous administrators. New leaders must, as a first step, test those assumptions in order to validate or change plans already in place. Of course, a broad range of other external factors may have changed as well. Demographics, enrollments, competition, and general economic conditions can change in time and alter the logic of the plan.

It is important to understand how a master plan can be affected by these issues, so several of the major forces that drive master plan development are discussed below.

Supporting Strategic Plans

The strategic plan is the initial step in the master planning process. It might even be called the step before the initial step. A strategic plan identifies the institution's vision; that is, where its leaders want it to go, and how they want to get it there. Many colleges already have this type of plan, but have not taken the next step, which is to determine how the strategic plan can have an impact on the physical campus.

The campus plan logically follows the strategic plan by facilitating the institution's mission. It is like preparing to take a trip from St. Louis to Chicago. The strategic plan is that while you live in St. Louis, you have a need to visit Chicago. The next step is to plan the trip. In this scenario, the master plan represents the map. You'll have to identify what routes you'll need to take and where the rest stops are along the way, so you can reach your goal on time. Your map (the plan) supports your mission.

If your institution is considering a master plan, but does not have a strategic plan in place, it will be necessary to identify strategic objectives as a first step in the master planning process.

Enrollment Changes

Whether an institution is experiencing an increase or decrease in enrollment, a master plan is essential to help match facility assets with changing demands.

Consistent changes in enrollment, over time, will change the facilities needs of the college. Due to a shrinking of the pool of potential students in the early 1990s, many campuses experienced declines in enrollment. Some schools are now seeing a modest reversal trend, while others are holding steady or continuing to decline.

The college-age population peaked in 1980 as did enrollments at most colleges and universities. Demographers speculate that student populations will level off over the next half century (see Figure 1.3). The number of college-age students in the next fifty years is expected to increase only from 24 million to about 26 million. These projections take into account all college-age students in the United States. The number who will actually choose to attend will, of course, be significantly smaller. Some small colleges have had to shut their doors due to their inability to sustain a threshold level of enrollment. Facilities managers are therefore challenged with employing diminished revenues to make optimum use of facilities for fewer students. Repercussions of this financial pressure include issues such as high utility costs to maintain heating and cooling in buildings that are in many cases not fully utilized.

To offset this flat market for students, many colleges are expanding their traditional roles by offering courses to part-time students in the evenings and on weekends and by recruiting outside the traditional regional or even national boundaries.

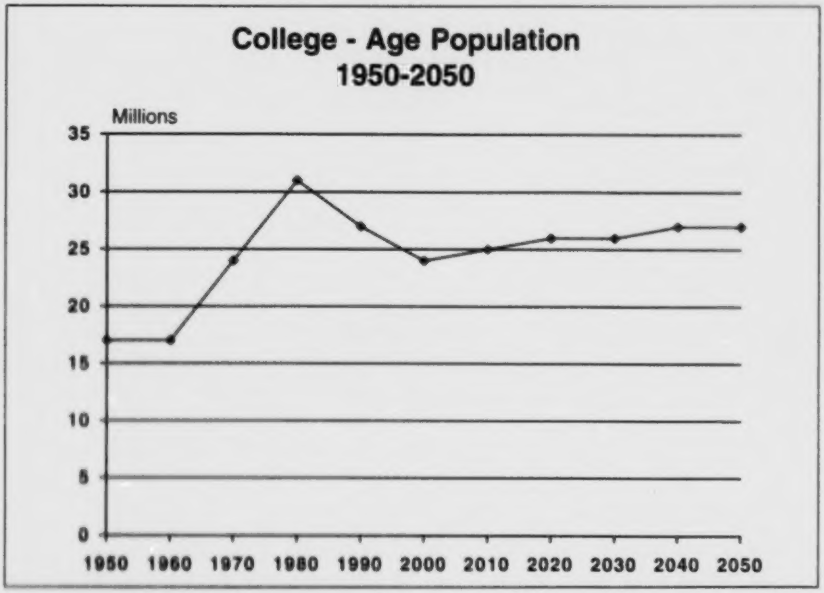

Figure 1.3. College-age population in millions. (Source: American Council on Education, 1986)

Understanding how to serve this new market of students is vitally important. Nontraditional students require different support facilities. They may not, in most instances, need residence halls, but they do need accessible parking and other amenities such as longer library hours and child care services. Consideration should be given to the special needs of the older part-time student.

A master plan helps colleges identify what kind of facility assets they need to launch new programs or capture new market segments. The master plan can help guide the expansion of programs and the use of facilities to house these programs.

New Administration

In the APPA survey, 26 percent of those surveyed said their master plan was a direct result of a change in leadership. New presidents, coming in with new visions and aspirations, may feel a need to change a school's strategic focus. Many recognize that a master plan can be employed to reorient the thinking of entrenched administrators and tenured faculty about the institution's direction.

When a new college president takes office, change is usually felt in all aspects of the institution. Physical changes to the campus are a tangible and appealing demonstration of a president's new vision, often a person brought in with hopes of making the institution more competitive. Presidents can make literally visible progress toward this goal by changing the campus "skyline."

Georgetown College in Kentucky is an example of a college that had recruited an energetic new president to reinvigorate the college. The college had conducted a master plan in 1974, and subsequently revised that plan in 1983. In August 1991, the new president came on board and immediately requested to know the status of the campus plans. Just two months after reviewing the material, the master plan process was begun. The new master plan for Georgetown College was a powerful vehicle for this administrator to develop and communicate a new vision for Georgetown College.

Expansion of Facilities

Planning to build? A master plan is essential to avoid costly mistakes. Certainly it is possible for a school to expand its campus one building at a time without a master plan; this happens time and again. However, because this approach does not anticipate other facilities that may be needed in the future, there is no certainty that the institution's resources are being applied efficiently. Master planning looks at the big picture to better understand how everything fits together.

Master planning can be compared to financial planning. It takes far less time and effort to simply deposit money in a savings account, but the return on investment can be far greater if options are studied, and a determination made regarding which investment vehicles may yield a higher return. Master planning is an investment that yields superior return on capital, because it leverages present investments to support future goals.

Institutions always seek to allocate scarce resources where they will do the most good. Within an institution, various groups compete for these resources. By conducting a master planning process, the various constituents of the institution can investigate options together and determine which options will work best. In this way the college gets the best possible value for its money, where "value" is understood as the appropriate allocation of resources.

Acquisition of Property

Land acquisition is of critical importance to institutions. Deciding whether to purchase a piece of property without a master plan can create a puzzling dilemma. If the school chooses not to purchase the property, it might be developed by others for a purpose that adversely affects the institution's future. On the other hand, colleges and universities should not buy property that will be a management burden, having no strategic use to the institution. Are there sufficient funds available? Will the property be used? For what purpose? If the university passes on the opportunity, what will happen to the land? Will there be another chance to buy it? These are just some of the questions that may be raised when an institution has the opportunity to buy property.

The need to answer these questions gives greater urgency to the development of a master plan. A thorough master plan should consider all adjacent property and determine whether that property can be of use to the institution now or in the future. Having a master plan in place shortens the time required to make these decisions, since the administration and board are already aware of the property's potential value to the school.

Land acquisition also has impacts that go beyond the campus proper. If the campus is located in a residential area, acquisitions will unquestionably affect the surrounding neighborhood. In instances when the school purchases residential land as it becomes available, the result is often neighborhood instability, an undesirable outcome not only for the wider community but also for the institution.

Owner-occupants may leave the area if they anticipate that their investment has been compromised by the actions of the institution. When they leave, the neighborhood can deteriorate. In such an uncertain environment, neighboring landowners are less inclined to maintain their property, thus beginning a cycle of decay.

The surrounding neighborhood will fare much better if the institution has a master plan that conveys a clear picture of the institution's intentions. In short, clear objectives contribute to making good neighbors.

Whatever the initial impetus for a master plan, the process follows a logical order that includes the same basic steps, but may vary in the concentration of effort in any one area. The next chapter describes this process.

2. THE PROCESS

This chapter presents a model of the master planning process. It begins with the institution's mission and ends with the plan document—the final product that documents the process used to accomplish the mission.

Yet although it is common to think about master planning in terms of a distinct product, such a view is misleading. As important as the final product is, the quality of the process is more critical to the ultimate success of the plan. The process is as important as the product—with a flawed process, the end product may languish on the shelf.

The Nine Box Diagram

The Nine Box Diagram (Figure 2.1) presents a view of master planning in terms of both the process and the product. In this conceptual model for master planning, the nine boxes represent the master planning *process,* the box on the right the *product.* The master planning process begins with the school's mission statement (represented by the circle in the diagram).

In the first column under the mission, strategic, functional, and physical information is gathered independently, then organized and analyzed. In the second column, synthesis of this information begins. For example, the academic program informs the development of a facilities space program. In the third column, the planning team develops potential planning solutions, which

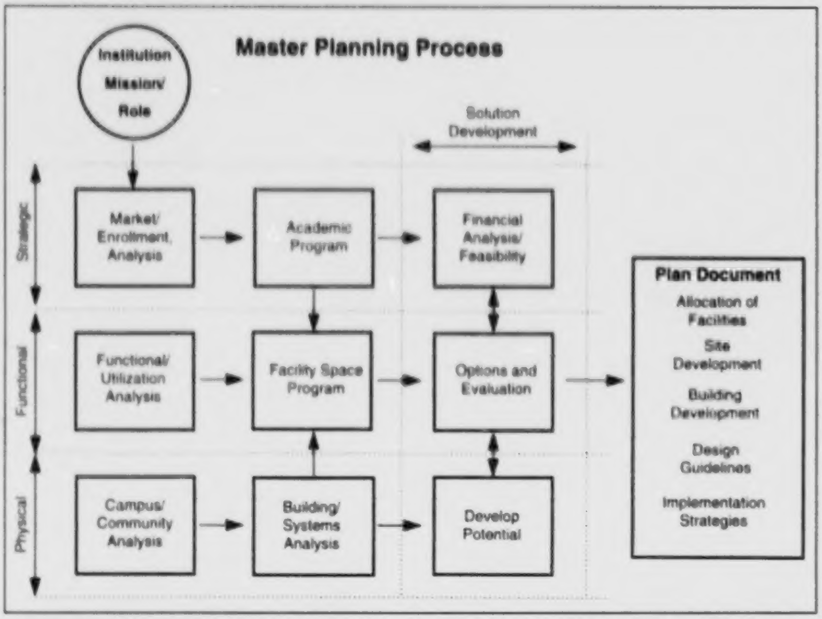
Institution
Mission/
Role
Master Planning Process
Solution
Development
Strategic
Functional
Physical
Market/
Enrollment,
Analysis
Academic
Program
Financial
Analysis/
Feasibility
Functional/
Utilization
Analysis
Facility Space
Program
Options and
Evaluation
Campus/
Community
Analysis
Building/
Systems
Analysis
Develop
Potential
Plan Document
Allocation of
Facilities
Site
Development
Building
Development
Design
Guidelines
Implementation
Strategies

Figure 2.1. Nine Box Diagram of master planning. (Copyright The Christner Partnership, Inc.)

are evaluated and refined in an iterative process. For example, options are tested against their financial implications and the campus overall development potential.

The master planning process generates extracts physical, time-based (especially regarding construction schedules), and economic details, all elements needed to begin implementation. After due consideration of all options by all involved parties, a preferred solution invariably emerges.

Finally, the preferred option is developed into a final coordinated master plan. Such a plan integrates how the buildings are to be used, how the campus should be developed, design guidelines for future development, and timing and cost implications. Since the institution's environment is far from static, a good plan may well incorporate more than one alternative, offering various responses to different future conditions.

Master Plan Varieties

To paraphrase George Orwell, all master plans are comprehensive but some are more comprehensive than others. There are plans that only address certain areas of a campus. For example, the situation may call for an interiors master plan, or a landscaping master plan, or even a utilities master plan, but these are rightly considered master plans only if they begin with a mission and address the strategic, functional, and physical aspects in an integrated manner.

If the plan does not in some way address each of the elements shown in the Nine Box Diagram, it is not a master plan. Documentation of useful information may properly be called a "report" or a "study," but is not a master plan without all of the elements described above.

■ STEP BY STEP

A ladder whose steps are irregularly spaced is illogical if not dangerous. A ladder without steps is useless and does not accomplish its purposes. So it is with developing a master planning process. The steps have to be in place and they must be in the proper sequence. A master plan does not evolve from miscellaneous documents. It is a deliberate process, with a specific goal, and specific steps for reaching it.

Master planning is judged by its end products, the summary report or the colorful campus map that depicts future building sites and new landscaping. Although it is important to end up with a logical and nicely drawn plan, it is the quality of the process that should be the primary focus.

Generally speaking, the better the planning process, the stronger the resulting product. The better the process the more likely the plan will actually be consulted in the future. Master plans that have dropped into obscurity almost immediately after completion do so most often because of a faulty process, such as restricting the discussions to a small group and thus denying input from all constituents.

If the planning process is flawed, the plan is of questionable validity and may not be useable, whether or not the ideas themselves are "good." Simply put, the process *is* the product, and a sound process will yield solid results.

As illustrated earlier in the Nine Box Diagram, master planning involves five different major steps:

- strategic review
- functional analysis
- physical analysis
- solution development
- plan document

Within these steps, of course, a variety of tasks must be accomplished. The scope of these tasks will vary somewhat from plan to plan, but following is a summary of the most common tasks.

Defining the Mission Statement

The master planning process must begin with a clear understanding of what the institution is all about, its mission and goals—where it is going. Every master plan must therefore commence with a well-defined mission statement. Mission statements can be very specific or they can be general, but most importantly the statement must be precise and easily understood.

Direction and objectives are the two most important elements of the mission statement. These are very basic components. The point of a plan is to achieve goals, and the most effective way to reach those goals is to define them in the first place, and then develop choices and strategies to meet them. "Begin with the end in mind," as author Stephen Covey writes in *The Seven Habits of Highly Effective People* (1989). A clear mission statement generates a focused and well-directed planning process and serves as the well-spring to astoundingly effective and coordinated action.

If an institution does not have a mission statement at the beginning of a master plan process, it must be developed; if the institution already has one, it needs to be carefully reviewed. The mission statement must be recent and powerful, or there is the risk of wasting effort in proceeding with a master planning process.

Strategic Review

The strategic review is the first step in the master planning process and through it the institutional goals are articulated. This step is represented by the top horizontal row of boxes on the Nine Box Diagram. This review is usually led by the school's chief executive and his or her assistants. The strategic review involves administrators and faculty, perhaps aided by a corporate strategic planning consultant.

If the institutional mission and strategic plan have been developed within a separate process prior to the physical campus planning, this phase may only involve validation and interpretation of the implications for physical planning. Sometimes other aspects may be involved, such as clarifying the relationship of the academic plan to the financial plan.

In this initial step of the process, the institution must define itself in terms of what it is and where its leadership desires it to go. This stage is the most crucial, for it provides the foundation on which all the other steps are based. In a very real sense the strategic review determines the outcome of the master plan.

Functional Analysis

The second step on the ladder is the functional analysis, which takes into consideration space utilization and the listing of facility needs. This step is represented by the middle horizontal row on the Nine Box Diagram.

Conducting a functional analysis of existing facilities permits determination of a baseline for planning for the future. What is it that the institution lacks, or that it might need in the near future? Which programs are on the rise and which are on the wane? Use of current facilities must first be analyzed before looking at other options. This analysis often involves normative studies to compare facilities with national/industry standards.

In this stage, it must be determined if facilities are being used to the fullest extent possible, given reasonable standards of use. Are some classrooms being used only a few hours per day and if so, is there a way to increase utilization by working with the faculty and class schedule? If one program is increasing in terms of enrollment and another is declining, can facilities be reassigned to address this need? Are classrooms or laboratories underutilized because of turf issues and departmental "ownership"?

Small task forces can be formed and assigned to answer these questions by interviewing faculty and staff administrators. An outside planning consultant can be helpful by asking touchy questions and reporting findings in a manner that is above internal politics.

The functional analysis stage is also an opportunity for revisiting space standards and utilization goals, and understanding better what can be done with existing facilities. Such an analysis will save time and money when beginning implementation of the plan. The projected space needs should measure space requirements against normative standards.

Physical Analysis

The physical analysis assembles relevant information about the physical constraints and opportunities. Campus building systems should also be addressed in the physical analysis stage. The facilities administrator needs to know for how long the existing infrastructure will be functional in supporting future plans. Will upgrades or modifications be required? In some cases an entirely new system will be needed. Again, if these issues are addressed prior to implementation of plans, the institution will witness substantial cost and time savings.

The purpose is to develop a thorough understanding of the facts concerning these issues and to make limited judgments from qualified analysis, but not to leap to conclusions or focus in on solutions.

Solution Development and Evaluation

Once the first three steps have been completed, and strategic, functional, and physical issues have been identified, the planning committee can begin examining potential solutions.

The solution development stage is the creative stage. All the best ideas should be put on the table and the best way to do that is to be expansive, to be open to the possibilities. The evaluation of options separates the wheat from the chaff as each option is considered against evaluation criteria.

This step should also be used to evaluate a number of options, taking into consideration not only monetary issues but also physical capabilities. For example, should land be purchased to build an additional parking lot, or would it be better to pave an old ball field no longer being used?

The consequences of each decision made about the physical environment must be considered. While the campus may be in need of additional parking, two acres of blacktop may not be what neighbors were hoping for, and constructing such a project might not be worth the risk of negative reactions.

It is imperative that the institution weigh the consequences of actions in this stage of the process. All aspects of the expansion must be determined, including such elements as land acquisition, demolition, renovations, residential buy-outs, community concerns, and impact. Understanding the development potential for every project allows a sensible evaluation of each available option.

Plan Document

Once planning decisions have been made by following through on the five previous steps, the outcomes of the process must be documented.

The plan document comprises such elements as answers to the questions concerning assignment of functions to facilities, specific site development, building development recommendations, design guidelines, and implementation strategies. These elements should correspond to sections within a well-organized, clearly presented document, large enough to include narrative text and readable graphic plates (e.g., site plan, campus analysis diagrams, phasing diagram), but not so large as to be impractical as a reference.

In some cases it may be useful to produce a limited set of documents including complete information from the master planning process, as well as a larger number of a summary document that presents the most important information. There must also be a balance between quantity and production cost, as a large number of highly specialized documents can be costly to produce.

Communication is of critical importance for the success of not only the final recommended plan, but also the information and logic that form the foundation of the plan. The inclusion of all the alternatives considered allows readers to follow how the planning committee arrived at their conclusions. Conditions and needs are ever changing in the real world and complete documentation of the facts and criteria allow for a more efficient updating of the plan in the future, should that be necessary.

A master plan document is useful when attempting to gather both internal and external support for the plan. Not every final document is the same, of course; each will vary depending upon the intended use.

■ CHARACTERISTICS OF A SUCCESSFUL MASTER PLAN

Every master plan must be include certain basic characteristics that contribute to its effectiveness. According to the APPA survey (see Figure 2.2), top priorities for successful master plans included a well-defined mission statement, guidelines for future development, expectations for the future of academic programs, space program parameters, a site analysis, facilities inventory, a land acquisition plan, landscape and interiors master plans. Items listed first were deemed most important by survey respondents.

The most important feature to facilities people was the inclusion of guidelines for future development. Clarifying the future

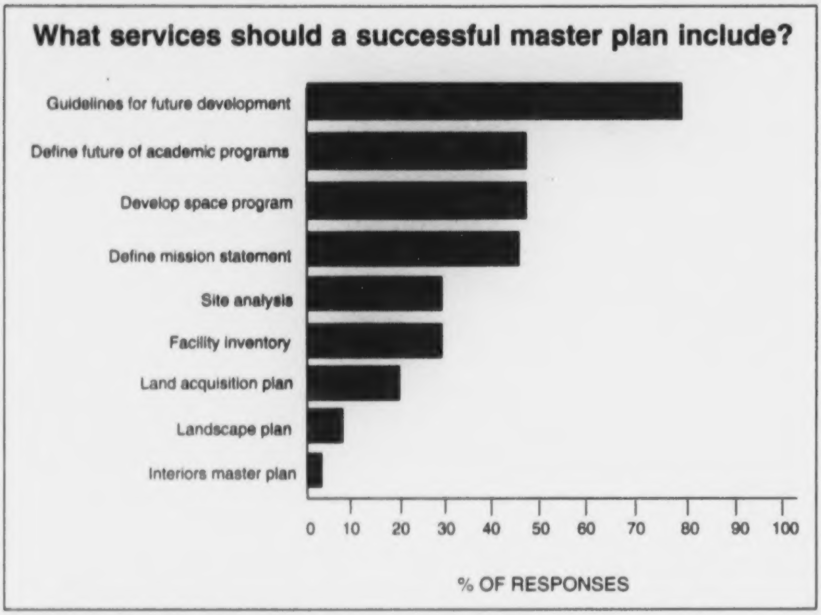

Figure 2.2. Services that should be included in a master plan.

of academic programs was the second most important service. Overall, the aspects that were viewed as critical to the process relate to assembling clear information as a baseline for development as well as defining the direction of future actions, such as space allocation and land acquisition.

Guidelines for Future Development

A successful master plan should be able to provide the institution with a map that establishes guidelines for future development. These guidelines should be dynamic and flexible, addressing not only present needs but also those anticipated in the future. The guidelines should take into consideration estimates of demographics, academics, and enrollment of the institution, while clearly defining acceptable situations.

The Future of the Academic Program

The institution's academic program is, or should be, the driving force behind all of its programs; therefore, the ability to anticipate the future of academic programs is of the utmost importance. Development guidelines can delineate the size, location, height, character, and style of future buildings. Even so, they should not be so prescriptive as to hand off the designs of future facilities. Having said that, campuses with strong development guidelines have been more successful over the long haul than campuses with few or no guidelines for future development.

Faculty and staff must be involved in developing an understanding of the institution's academic future. Key individuals in the academic planning process should be part of the planning committee, and should form task forces to solicit input from faculty who are not part of the official planning team. Knowing which academic programs are on the rise and which are declining assists in determining and regulating facilities expansion.

The Space Program

A successful master plan should provide a space program that documents and interprets an institution's space needs. The master plan should identify current and projected needs according to the institution's mission.

If changes are projected in programs and/or enrollment that will happen over a period of time, it may be appropriate to develop several space programs for different time frames, perhaps looking forward five and ten years. The space program should address each department's internal space as well as all external space, including athletic fields and parking needs. It is important to forecast needs for nonacademic departments as well as academic departments.

Space needs are informed by national normative standards, which help level the playing field and mitigate the variations in stated needs that are drawn from interviews with individuals. Some staff and faculty will be too modest in their requests, having become used to getting by on a shoestring. Others will ask for twice as much as they need, cynically expecting to have their requests cut by higher-ups. Interviews with staff, faculty, and students help to identify special needs that are not adequately addressed by normative standards. And both normative standards and local uniqueness must be weighed against local and regional peer institutions.

The space program gives a platform to determine where space deficiencies or excesses exist or are likely to develop in the future. This helps to identify which departments' needs are most appropriately met with new facilities and how the space they are currently occupying might be redistributed as new facilities become occupied.

A key for developing a successful space program is ensuring that the total need for new space gleaned from interviews and normative standards is tied back to the institution's fiscal projections (budget, student headcount, credit hour generation, faculty lead, etc.). A program that projects anticipated growth only as speculated by department heads can lead to a 10,000 student university showing a "need" that would accommodate a 20,000 student population.

Site Analysis

A site analysis views the site in its present state, taking into account various external elements and recognizing problems and opportunities as future development takes place on campus.

Conducting a site analysis involves examination of physical and experiential aspects of the site and how each contributes or detracts from the campus as a whole. It also explores the community context of the campus and how campus and community interacts with each other, both positively and negatively. The analysis will document specific issues such as the exact footprint of existing buildings, number of parking spaces, landscaping, walkways, utility locations, pedestrian and vehicular circulation, and accessibility for people with disabilities. It will also examine broader issues such as functional zoning of the campus, architectural significant of buildings, outdoor rooms and edges and campus history. Understanding these aspects of the campus allows the planners to develop planning options that build upon the strengths of the campus and improve or eliminate the weaknesses.

Facilities Inventory

The facilities inventory describes how existing buildings are being used, in terms of space usage and departmental control. This inventory is an important component of the master plan as it documents all internal space utilization, and whether space is being used to its optimum potential. It can also highlight inconsistencies in space allocation between, for example, peer departments in a building. Included should be documentation of which classrooms are used sparingly and which are providing a better understanding of the institution's internal space needs.

Land Acquisition Plan

No master plan is complete without a land acquisition plan. A land acquisition plan increases in importance for universities facing town and gown issues, but all institutions must know how and when, or if, they need to expand beyond or contract within their present borders.

Not only is it important for the administrators to be clear about these needs, but the surrounding community will also be interested in learning of future plans because of the potential implications for both individuals and the community itself. The master plan is a suitable context for developing and disseminating land acquisition information.

By knowing what property is needed (and what property is not needed), the institution is better prepared to take appropriate action when property is placed on the market. Such information will ultimately save time and money when such situations arise.

■ BARRIERS TO MASTER PLANNING

As manifestly valuable as planning can be in helping to achieve goals, facilities administrators often encounter resistance to cam-

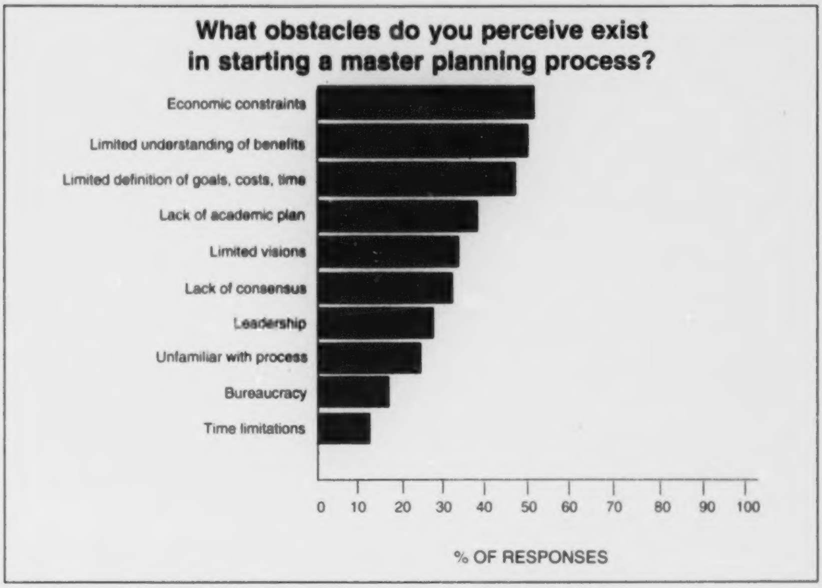

Figure 2.3. Perceived obstacles to master planning.

pus and facilities planning within the institution. Economic constraints, limited understanding of the benefits and limited definition of goals, time, and cost top the list of obstacles (see Figure 2.3).

The root source behind these obstacles is the administration's limited understanding of master planning benefits and process. This translates into a lack of commitment in terms of time, money, and leadership.

Economic Constraints

Tight budgets and limited resources are cited as the main obstacle in developing a master plan. College presidents understandably can be fearful of proposing that the board allocate a six-figure amount on a master plan. Even if the board is supportive of the concept, economic constraints often table the issue until funding becomes more available. The problem is that master planning is seen as a "good idea" rather than an immediate need and, as such, is given a lower priority in fund-raising efforts.

In the meantime, actions are taken (money spent) to address immediate problems with temporary solutions. Making piecemeal facilities decisions around the campus will ultimately cost more in lost opportunities than a good master plan would have identified.

Master plans range in cost from a low of around $100,000 up to about $300,000 (1994 figures). The price is very dependent upon the size of the campus, the scope of services, and the final form of the end product.

The price of planning is important especially to schools on a tight budget, but the cost of the plan should not be considered as an expense. Planning fees should instead be viewed as an investment in a process and product that in time will more than pay for itself over time. Contrast the fee range above with the long-term cost implications of a $5 million building that does not adequately accommodate future needs five years after it is completed, or the decision to locate a small new building in a spot that blocks future expansion of a large one.

If the institution cannot allocate the resources in one fiscal year, an option is to consider organizing the master plan over two or more years and funding the cost in two fiscal budgets. Also, outside funding sources such as foundations do exist and can be identified by investing time into conducting a survey of resources.

Limited Understanding of Benefits

In order for the master plan to reach fruition, the benefits of the plan must be easily and fully explainable to all constituents. Many times administrators and board members see the master plan only as a concept of future expansion, something helpful to refer to but not a necessity, largely because they do not comprehend all the benefits of the process. Getting the go-ahead to proceed with master planning often comes down to overcoming skepticism about whether it will be worth the expenditure of time and resources.

The composition of the planning committee, which will be discussed in more detail in Chapter 4, plays an important role in overcoming the understanding-of-benefits obstacle. The planning committee must include a variety of personnel—constituents from all campus programs—not only for the value of their input, but also to give them a better understanding of master planning and how it applies to their roles on campus.

The biggest argument for conducting a master plan is, of course, that it saves the institution money. The master plan provides a road map that enables campus expansion without duplication and waste.

Limited Definition of Goals

Planning is important, but a plan without a well-defined goal is virtually useless. Too many times facilities administrators have an idea of where their campus should be headed and what needs should be addressed, but a definite goal has not been pinned down with endorsement from representative constituents. The process may begin as a general plan for expansion and development, but since some elements are unclear, such as academic programs or enrollment expectations, the purpose of the process becomes lost or questions are raised regarding the original intentions.

As unproductive as the absence of planning may be, a planning process that is unfocused or poorly directed will yield poor results. If there is no goal, constituents within the institution who were asked to help with the plan may begin working at cross purposes, and wasting time, money, and resources.

Sometimes goals are not as obvious as one might think. An important part of the process is to take some time to consider all possible objectives the master plan needs to fulfill. Determining the final destination is essential to begin contriving a plan that hits the mark.

Time Considerations

Time is a valuable resource, but its value increases if it is used efficiently. A master planning process can take anywhere from four months to a year, depending upon its complexity and its scope. Some university decision-makers might think this is too long a process to undertake. Time has become an argument against master planning, especially in the face of pressing needs. For example, "Why should we do a full-blown campus plan when all we need is an additional residence hall right now?"

When an institution has a need, constituents want it addressed immediately. Yet by contrast, almost any construction project will take longer than the few months required to do a master plan, and may not necessarily provide the best solution for even the short term, much less the long term run. For example, the new residence hall may allow the school to initiate a new program and accept higher enrollment yielding new tuition revenue, additional room and board revenue, etc. But if in a year the school decides to add an additional facility it may end up spending twice as much because of poor planning.

The master planning process is too important to forego. While time is valuable, how the time is used is most important. Master planning is worth the relatively short time it takes to avoid costly and time-consuming mistakes.

Communication

Effective communication is the key to good planning. Lack of communication can kill the most worthy of projects, and it has proven to be detrimental to master planning. While facilities administrators may know the value of master planning, the faculty, board, and the community may not.

Communicating the importance of master planning can be difficult. Commitment from the master planning committee is a prerequisite. The most effective communication develops out of master planning task forces—small groups of individuals who meet with internal and external constituents to answer questions, quell misconceptions and explain the process and intended goals.

Communication within the institution is essential. When the administration and other decision makers become convinced of the value of a master plan, that value must be conveyed to faculty, staff, students, alumni, and the governing board. But more important still is the need to maintain a high level of communication throughout the planning process.

Community interest groups will also benefit from good communication. Master planning can be perceived as a threat to the status quo, and involvement of community representatives in an open process will help prevent rumor and fear from derailing needed approvals or municipal cooperation.

Section I has described what master planning is. Section II presents how to prepare for actually beginning and applying a master planning process.

Section II

Preparing For A Master Planning Process

3. DETERMINING OBJECTIVES

Facilities managers are usually relied on to organize and prepare for the master planning process. It is assumed that facilities administrators have the experience or knowledge to do the job. But because this is often the first time through the process for the facilities manager and the assignment is added to what is already a full-time set of responsibilities, the preparation tasks may not get adequate attention. A greater understanding of what is involved will allow you to break the job into manageable tasks that you can accomplish successfully.

An essential prerequisite is a thorough understanding of the tasks involved in order to plan realistic timeframes and better set expectations for yourself and others.

As with any large undertaking aimed at moving an organization forward, the role of the coordinator does not imply that you make all the requisite decisions; rather, you should think of yourself as educator and facilitator, showing the way and identifying options for the executive leadership.

The tasks for planning for master planning include selling the concept internally, establishing strategic objectives, determining uses for the master plan, and deciding on end products.

■ INTERNAL COMMUNICATION AND PROMOTION

Once you are certain of the value of master planning, the next step is to convince others of its significance. The best approach to promoting master planning internally is to match the salient benefits to the appropriate constituency to build a broad base of support.

It is possible to develop an understanding in everyone that they can get something useful from the process. The president may respond to the benefit of creating a visual representation of his or her vision for the institution. The business manager may appreciate that the master plan will provide a strong foundation for capital needs planning and for increasing the utilization of existing facilities to minimize investment in new facilities. The development director may be eager to have persuasive graphs and narratives that can help in communicating the vision to funding sources and the public. The facilities manager will embrace the promise of logical implementation and the prospect of having good base plans for facilities management.

Each constituency can find some compelling benefits in this basic list:

- Ensuring that facility assets support strategic goals
- Creating a shared vision within the institution
- Making better use of existing site and facility
- Anticipating future site and facility needs
- Avoiding waste and disruption resulting from uncoordinated development
- Establishing realistic schedules of capital needs
- Enhancing campus appearance
- Increasing credibility with governance and funding sources
- Developing base data and maps for facility management
- Providing supporting materials for fund-raising efforts

Of course, the president is most often the opinion leader, and with his or her support it will be easier to make the case with others. Conversely, without the support of the president, if the process goes forward at all, the prospects for successful master planning will be greatly diminished.

In addition to the persuasive impact of a good list of benefit statements, it can be useful to get the president to discuss master planning with his or her counterpart at another institution that has successfully undertaken this process. There is, of course, some risk in this approach as there is no assurance that the other president has had a particularly positive experience.

THE PREREQUISITE TO MASTER PLANNING

Importance of the Strategic Plan

Before beginning the master plan, a strategic plan for the institution must be in place. The strategic plan defines the institution by stating what its mission is and where it wants to go. If the answers to these two questions are unclear, the master planning process cannot properly begin (see worksheet in Figure 3.1).

The strategic plan can be developed independently of the master plan, but it is often included in the master planning process and defined with the help of a professional consultant. If a strategic plan is in place before hiring a consultant, the time and cost to do a master plan can be reduced, since strategic planning itself can be a fairly involved process.

If the decision is made to develop a strategic plan internally, remember that it must be linked to the mission statement, as the mission statement defines objectives for conducting a master plan. Together, a well-balanced mission statement and strategic plan form the backbone of a solid master plan.

In developing a strategic plan, it is important to define the uniqueness and essence of the institution, in terms of the characteristics embodied by it.

The strategic plan should address such issues as market demographics, projected enrollment, campus location(s), the client

Mission/Purpose of Institution

Starting with a mission statement gives a focus and direction not only to your institution but also to the master plan.

Mission Statement: ______________________________

____

____

Characteristics of Institution/Campus

Defining the institution, where it's been, how it got where it is today, helps to identify the uniqueness of your institution and allows you to recognize those historical aspects that support and complement your mission.

Primary and secondary roles (e.g. level of education i.e. undergraduate, graduate, continuing, research, health care, land-grant, teachers college)

____

Academic programs/degrees ______________________________

Size (enrollment, staff) ______________________________

Student body (age range, nature of student experience, residential/commuter, day/evening/weekend populations)

____

Community context (size of community, relationships with institution)

____

History (original campus concept, growth/planning, recent planning) ______________________________

____

Site (nature of site e.g. urban, suburban, rural, size of campus, number and size of buildings, housing and special amenities, remote sites)

____

____

Figure 3.1. Institutional mission and purpose worksheet.

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base, and services needed to respond to these clients. Administrators may have lofty dreams of what they want for their university, but when they develop a strategic plan, they may discover that these objectives are not realistic.

How the Strategic Plan Works with the Master Plan

It is possible to have a master plan without a strategic plan, but it is not advisable. For instance, if there is a need for a building but its location is unclear, the planning consultant can look at the campus as a whole and determine where the facility needs to be situated. Of course, an activity of such limited scope can hardly be called a master plan.

However, a master plan will not by itself answer these questions: Who's going to pay for it? Is there a need for this facility? Does it conform with spaces needed by academic programs?

All of these issues should be addressed in the strategic planning process—the stage where strategies are identified for reaching the institution's goals. The master plan simply provides the road map. The strategic plan itself does not address any of the physical facility needs; instead it provides the basic direction for the university that then allows more detailed questions to be asked and answered.

DECIDING HOW TO USE THE MASTER PLAN

There are many good reasons for conducting a master plan. In the APPA survey, we asked facilities administrators to identify the top reasons why they felt it was necessary for their college or university to have a master plan in place. Their response is the basis for the worksheet in Figure 3.2.

In going through the list, there is a tendency to check off numerous issues as "top priority." However, if too many are designated as "top priority," the document becomes meaningless. Top priorities are those items that actually drive the need

Issues and Priorities

There is usually a driving need which triggers the process of a master plan. Identifying critical issues will help focus on what you want the master plan to accomplish. Identifying other issues of secondary importance will allow you to take advantage of opportunities as you define the scope of work.

Legend **Top Priority:** issue driving the need for master plan
Medium Priority: highly desirable to include in master plan
Low Priority: not critical to include in master plan

Top Priority	Medium Priority	Low Priority	Issues/Trends	Comments
			Organizational	
			Restructuring	
			New administration	
			Regulatory authorities	
			Financial Capabilities	
			Income	
			Fund raising	
			Bonds/loans	
			Grants	
			Enrollment	
			Increasing/growth or decreasing/shrinking	
			Recruitment	
			Retention	
			Demographics/maintain stability	
			Target user groups	
			Academic Quality	
			Ranking with peer or aspirant institutions	
			Accreditation	
			Library	
			Student/faculty ratio	
			Faculty recruitment/retention	
			Academic Programs	
			Enrollment by program	
			Growth/decline adjustments	
			Appropriate programs for users	
			Space allocations	
			Poor alignment of need and space	
			Inappropriate space assignments	
			Changing needs	
			Classroom & lab utilization/size	
			Number/design of residence rooms	
			Athletic/recreation facilities	

Figure 3.2. Issues and priorities worksheet.

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Top Priority	Medium Priority	Low Priority	Issues/Trends	Comments
			Site	
			Image/entries/visibility	
			Size of campus/remote sites/acquisition	
			Adjacent land uses/neighborhood context	
			Physical charac./topography/climate	
			Controlling authorities/zoning/fire	
			Campus zones	
			Vehicular circulation	
			Parking	
			Campus history	
			Architectural significance	
			Open spaces/landscaping	
			Pedestrian circulation	
			Core campus pedestrian experience	
			Utility systems	
			New development sites	
			Accessibility	
			Buildings	
			Functional location appropriateness	
			Use appropriateness	
			Compatibility of use mix/zoning	
			Flexibility/growth capacity	
			Adequateness of space	
			New buildings	
			Physical conditions	
			Code compliance	
			Accessibility	
			Building circulation	
			Maintenance	
			Image/entries	
			Finishes	
			Technology	
			Computer network	
			Classroom technology	

Top three reasons for developing a master plan:

1. ______________________________

2. ______________________________

3. ______________________________

Figure 3.2. Issues and priorities worksheet, continued.

for the master plan in the first place. Medium to low priority issues are those issues that are not critical to master planning, but that the plan should address as part of the process.

In going through the accompanying worksheet, check off no more than five or six in the top two categories, and at the end, mark only the top two or three reasons.

Deciding what your motives are is an important stage in the process. End products coming from the master planning process vary enormously, and affect the time and cost of the plan. End products cannot be defined without defining how the master plan will be used.

■ USES AND END PRODUCTS

In addition to defining services, it is important to understand how the master plan will be used and what form the product should take. By "product" we mean the document or other physical item that represents the completed planning process and that can be referred to in the future by other people not directly involved in the planning process.

This product can vary enormously, from written narratives to models, even videos; it all depends upon how the plan will be used (see Figure 3.3). Of course, there are fee implications based upon the complexity of the master plan and the end products.

Whenever possible, information should be presented graphically as opposed to text. While text and numbers may be precise, graphic images more powerfully communicate the current situation and the outcomes of implementing recommendations. This is of great help, as most people have difficulty translating text into its three-dimensional implications. In master planning a picture is truly worth a thousand words—just look at an all-text master plan to decide for yourself if this is true.

The level of detail required relates to the intended audience, both its knowledge base and its possible response to (and endorsement of) recommendations and other information. If the master plan is to be used for making internal decisions, such as for establishing scheduling and financial projections for future

Uses for the Master Plan and End Products

The end products coming from the master planning process vary enormously and affect the time and cost of the plan. You cannot define what end products you need without defining how you're going to use your master plan.

	END PRODUCTS		Documentation of Total Process												Documentation of Select Studies												
✓	USES	Executive Summary/Recommendations	Site Development Plan	Implementation Strategy	Building Development Plan	Financial Feasibility	Rendering of Campus	Model of Campus	Video	Illustration of Proposed Development	Brochure	Computer Modeling	Documentation of Existing Facility		Landscape Study	Utility/Infrastructure Study	Interior Design Study	Parking Study	Traffic Study	Environmental/Habitat Study	Image Study	Design Guidelines	Feasibility Study/Adaptive Reuse of Existing Buildings		Special Products		
	Fund-raising/development	○					○	○	○	○	○	○									○				○		
	Meet regulations	○	○	○																							
	Plan capital expenditures		○	○		○									○	○	○	○	○	○			○				
	Improve program competitiveness						○	○	○	○	○				○		○				○	○	○				
	Communicate President's vision	○					○	○	○	○	○	○									○	○			○		
	Facility management base document		○		○							○	○		○	○	○	○	○	○			○				
	Enhance credibility for lending	○				○	○			○																	
	Establish development guidelines		○		○										○	○	○	○	○	○	○	○	○				
	Standardize materials/systems											○			○	○	○			○		○					
	Maximize utilization of facilities		○		○							○	○		○	○	○	○	○				○				
	Align facilities with academic programs				○							○											○				
	Support academic programs				○							○											○				
	Board approval for development	○		○		○	○	○	○	○	○	○									○	○					

○ Fill out bullet according to your needs.

Figure 3.3. Uses for the master plan worksheet.

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capital projects, the end documentation can be relatively lean, with simple (and less expensive) covers and graphics. There is no need to spend more than needed if the document will be used only internally. Internal-use documents are typically much more economical, a major consideration when attempting to get board approval. On the other hand, an internal-use-only master plan may be a missed opportunity to support a major development effort.

A tailored combination may serve well. With an executive summary as the "selling" document, the detailed record of the process might be less elaborate in its presentation. In any case, a detailed record of the master plan is essential, since it allows the college to revisit decisions as economic, demographic, political, and personnel changes occur.

Guide for Future Site Development

Perhaps most useful is a document that summarizes the process, presents data and analyses, and makes recommendations regarding future decisions. Cost and phasing information is fundamental, especially regarding projects that need to be executed before other projects can proceed.

When used as a guide for future site development, the master plan can help avoid costly mistakes, ensuring that such things as utility infrastructure are logically placed to accommodate new facilities. The master plan will become a more and more valuable tool as the future of the institution unfolds.

Scheduling and Financial Projections

Scheduling and financial projections are undertaken during the options development phase of a master plan, and although figures may not be exact, such projections enable the institution to have a better understanding of realistic possibilities.

The master plan can suggest when to begin a project on the basis of prior investigation of relevant issues. For example, by consulting the master plan the facilities manager should be able to determine the financial and physical feasibility of building a student center at any point in the near future, given other needs and priorities. Such information will prove invaluable to financial administrators as well as facility planners.

Obtain Board Approval

If the master plan is to be used for fund raising or to communicate a "new campus vision" for approval by the board or other regulatory authorities, more elaborate documentation that sells and builds consensus may be appropriate. This can include renderings, campus models, or even computer-generated "fly throughs" of the campus.

Respond to Changing Needs

If the greatest need is for internal use, the plan should include thorough documentation of the total process, so that it is easy to revisit the plan when things change. It becomes a "living document," one that is modified and updated on a regular basis.

A plan that is not dynamic is constrained by time. All institutions need a document that can address both present and future needs, no matter what the circumstances, and adapt as needs evolve.

Facilitate Fund Raising

The ability to raise funds has become a necessity for campus leaders. Master plans can assist in this effort, but the master plan must be easy for prospective donors of funding authorities to understand. They are not going to allocate money for projects they do not comprehend.

If the institution plans to use the master plan for this or other external uses, some type of synopsis of the master plan is needed. It must be something that can be presented easily and is visually appealing, enhanced by color graphics and renderings.

The master plan can be very creative, if the budget allows it. At Georgetown College in Georgetown, Kentucky, development personnel printed the college's master plan on laminated placemats that were placed at each table setting during fund-raising dinners. Potential donors could view the master plan during the event, and take the plan home with them for further review.

An impressive master plan document, with a concise summary, will significantly facilitate the search for funding. Once these issues have been addressed, the process can begin in earnest. Chapter Four gets into details.

4. WHERE TO BEGIN

IDENTIFY AVAILABLE INFORMATION

The time and cost required for the planning process will be significantly affected by the quantity and quality of information already available. The more current and relevant information available, the less time consultants must spend generating that material, and the faster they can get to analyzing the data and developing options for consideration. These must be valid and current documents to be used as a starting point for professional consultants. Often, a considerable amount of information is available, but it may take some time to locate. Also, complete information may require piecing together several sets of documents.

If good documentation is not available, consultant fees will increase in proportion to the additional work required to reach the starting point.

The accompanying worksheet (Figure 4.1) lists the documents the institution may already have on file. If some of this information does not exist in a concise, accessible form, the cost of gathering it using internal resources must be weighed against building the information-accumulation process into the cost and scope of the master plan.

Available Documentation

The services you require to support the uses to which you're going to put the master plan will depend upon what you already have in place or will be putting in place before the planning process starts. The data you have available will be helpful to your planning consultant in analyzing your institution.

Already have	Need to get	Documentation	Source/Origin	Date prepared	Comments
		Accreditation study/report			
		Aerial photograph			
		Base campus plan			
		Enrollment/demographic projections			
		List of peer/aspirant institutions			
		Long range planning committee minutes/reports			
		Maintenance study			
		Miscellaneous photographic information			
		Traffic/Parking studies			
		Previous master plan(s)			
		Retention survey			
		Signage study			
		Strategic plan/financial projections			
		Topographic survey			
		Capital improvement plan			
		Utilities plan			
		Mission Statement/ institutional goals			
		Space Inventory			
		Classroom/Laboratory Utilization			

Figure 4.1. Available documentation for master planning.

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CADD Documentation of Existing Structures

Increasingly, campus sites and buildings are being documented with computer-aided design and drafting (CADD), saving both time and money, not just in the master planning process, but potentially also for implementation of recommendations and management of new facilities.

If documentation already exists on CADD, the information can immediately be given to the person responsible for plannning, and the planning process can begin. If information is not on CADD, the facilities staff must decide if the consultant should document the planning process on CADD.

This decision must be made early on, because the CADD process is fairly time consuming; switching between CADD and manual methods is not feasible. If a minor master plan (quick and sketchy) will be conducted, spending the time and money for CADD documentation may not be worth the investment. However, in most cases CADD documentation is both necessary and desirable for a full-blown master plan.

Developing CADD planning documents takes a considerable amount of time, but once the data are entered, there are savings in time and money through each stage of the master plan. Also, after the master plan is complete, CADD documentation leaves facilities people with a set of useful management tools.

Previous Studies

Good records can facilitate inventories of current space, departmental allocations, and actual space uses. Any previous studies, which can include everything from previous master plans, surveys, and parking studies to land use and landscaping studies, will be useful. A past study of a particular building or site can contribute to the assessment of other buildings in the vicinity, as well as provide information about building and site systems.

Butler University in Indianapolis, Indiana, had responded to difficult and chronic parking problems with detailed parking and traffic studies by an outside engineering firm. Those investigations analyzed traffic forms, parking demand, and parking patterns, and evaluated a range of potential solutions. Although some key factors had changed over the intervening years, the basics were sound. This analysis was treated as source material for the campus master plan, thus avoiding the expense of duplicating a service that had already been conducted.

■ DEFINE SCOPE

Needs and issues that will be addressed by the master plan necessitate defining the services (tasks) to ensure each objective is satisfied.

Some pieces may already be in place, such as a mission statement and strategic plan. The remaining tasks that will constitute the master planning process include the following (see Figure 4.2):

- Strategic Review
- Functional Analysis
- Physical Analysis
- Solution Development
- Plan Document

Figure 4.3 lists components of the master plan, the activities that together make up the process; critical core activities are designated with a checkmark. These events, taken as a whole, make the master planning process more than just a study of various characteristics of a campus. The master planning process becomes a comprehensive decision-making system.

When designing the planning process, communication with a consultant can be helpful in refining the scope of work. Upon review of the proposed scope, gaps may be found in what was originally proposed. If there are such gaps, they should be filled in before proceeding with the master planning process.

Basic	Optional	Services	Proposed	Status			Comments/Level of Detail
				Already have	Owner to complete	Consultant	
		PHYSICAL ANALYSIS (cont.)					
		Building/Systems Analysis					
	●	Inventory of space					
	●	Functional/zoning					
	●	Appropriateness of use					
	●	Systems review and analysis					
	●	Accessibility analysis					
		SOLUTION DEVELOPMENT					
		Development Potential					
○		Opportunities/constraints					
		Options and Evaluation					
●		Options/strategies development					
●		Cost estimating					
●		Evaluation criteria					
		Financial Analysis/Feasibility					
○		Study of financial feasibility					
		PLAN DOCUMENT					
		Site Development					
●		Site master plan					
	●	Site acquisition plan					
		Utilities master plan					
	●	Landscape master plan					
		Building Development					
	●	Building master plan					
	●	Interiors master plan					
		Design Guidelines					
	●	Campus planning concepts					
	●	Architectural vocabulary					
		Exterior facades					
	●	Landscape treatment					
		Implementation Strategies					
●		Cost estimating					
●		Phasing schedule					

Figure 4.2. Master planning services worksheet.

Master Planning Services (to be used in defining scope of services)

There are some services which are basic to a master plan and others that are optional depending upon your needs and budget. Once you have determined which services will comprise your master plan, you need to identify the status of each service (whether it is something you already have in place, something you will need to complete, or something you want to include in the consultant's scope of services).

Basic	Optional	Services	Proposed	Status			Comments/Level of Detail
				Already have	Owner to complete	Consultant	
		STRATEGIC REVIEW					
		Institution Mission/Role					
●		Mission statement					
●		Strategic plan					
	●	Financial plan					
		Market Enrollment, Analysis					
	●	Demographic analysis					
●		Enrollment analysis/management					
	●	Market analysis/peer institution study					
		Academic Program					
	●	Academic program analysis/validation					
●		Goals/direction					
	●	Program alignment					
		FUNCTIONAL ANALYSIS					
		Functional/Utilization Analysis					
	●	Operations analysis					
●		Facilities utilization review					
		Facility Space Program					
	●	Space needs assessment					
	●	Comparative/normative standards					
●		Space listing					
		PHYSICAL ANALYSIS					
		Campus/Community Analysis					
●		Land use and zoning					
●		Physical and circulation					
●		Campus quality/image					

Figure 4.2, continued.

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Components of the Master Plan

STRATEGIC REVIEW

☑ Institution Mission/Role
  - Mission statement
  - Strategic plan
  - Financial plan

☐ Market Enrollment, Analysis
  - Demographic analysis
  - Enrollment analysis/management
  - Market analysis/peer institution study

☑ Academic Program
  - Academic program analysis and validation
  - Goals/direction
  - Program alignment

FUNCTIONAL ANALYSIS

☑ Functional/Utilization Analysis
  - Operations analysis
  - Utilization review

☑ Facility Space Program
  - Space needs assessment
  - Comparative/normative standards
  - Space listing

PHYSICAL ANALYSIS

☑ Campus/Community Analysis
  - Land use and zoning
  - Physical and circulation
  - Campus quality/image

☐ Building/Systems Analysis
  - Inventory of space
  - Functional/zoning
  - Appropriateness of use
  - Systems review and analysis
  - ADA analysis

SOLUTION DEVELOPMENT

☑ Development Potential
  - Opportunities/constraints

☑ Options and Evaluation
  - Options/strategies development
  - Cost estimating
  - Evaluation criteria

☐ Financial Analysis/Feasibility

PLAN DOCUMENT

☑ Site Development
  - Site master plan
  - Site acquisition plan
  - Landscape master plan

☐ Building Development
  - Building master plan
  - Interiors master plan

☐ Design Guidelines
  - Campus planning concepts
  - Architectural vocabulary
  - Landscape treatment

☑ Implementation Strategies
  - Cost estimating
  - Phasing schedule

Figure 4.3. Components of the master plan.

■ DETERMINE RESOURCES NEEDED

Can You Do It Yourself?

Some facilities or administrative staff may ask, "Why can't we do this ourselves in house?" This is a question often asked in discussions with presidents, board members, and even facilities people.

Facilities managers and their staff personnel are often well-qualified in many respects to perform the required tasks. However, it is also important to consider four main issues: experience, skills, credibility, and availability.

The first factor is experience. Does the staff have any experience in master planning? If they do, it may have been for only one institution, and not broad-based. A qualified consultant, on the other hand, will have accumulated experience through planning efforts for many different institutions, which is itself a benefit to the institution doing the plan.

Second, consider the skills needed. Specialized skills take time to develop and improve from being acquired through many diverse planning projects and multidisciplinary teams. A consultant will have acquired considerable specialized skill through the course of several planning studies.

Third, there is the factor of credibility. The expert is neutral and provides a nonpolitical, nonvested voice. This neutrality is the most salient factor. Someone from the outside can credibly facilitate the process by being neutral. It may just be human nature, but discussions, decisions, and recommendations come more easily with an objective person running the process with an unbiased point of view.

Finally, staff, even when qualified, may not be available. Facilities staff usually have full-time responsibilities that cannot be put on hold to conduct a planning process. Few universities are large enough to justify a staff planner position for the amount of time necessary to conduct a full master planning process.

Most institutions simply do not have the appropriate personnel to do master plans. Either staff are not sufficiently qualified or they have so many other duties that they do not have time to conduct a master plan. The master plan is an additional project for the facilities staff to undertake even when a consultant is running the process; in the meantime, routine job requirements of the staff must still be met.

For most institutions, the idea of "do-it-yourself" master planning is not a viable option. In many instances where the college or university elects to proceed on its own, the master plan becomes a burden that eventually falls by the wayside. Other "immediate" needs must be addressed, and the master plan can always be pushed aside until "next semester" or "during summer break." In order for the master plan to happen in a viable way, there has to be day-to-day dedicated effort until the process is complete.

Also, when the institution is paying a consultant, the master plan takes on official status—the institution wants to get its money's worth. A consultant can usually achieve better campus-wide cooperation. As a consequence, when the master plan is completed there is a high level of confidence in the credibility of the plan.

Professional Disciplines Required

The variety of professional disciplines required for a master plan is based entirely upon the services identified for the planning process.

If the master plan involves a landscape or exterior usage plan, a site planner is an essential member of the team. If building development is needed, someone with an architectural background is necessary. If there are special concerns, such as being located within a flood plain or in an environmentally sensitive area, consultants who deal specifically with these special types of issues are particularly important in identifying problems and options to resolve them.

In many instances, potential expansion and addition plans may affect historic buildings or sites. For such concerns, an architectural historian should be part of the team.

Every circumstance and service needs to be addressed in planning for master planning. In most instances, one planning firm can be engaged for the process, and can hire the necessary subconsultants. This approach is probably the most efficient means of retaining the right professionals, since the primary consultant should know when to retain other consultants with appropriate experience. There may also be existing working relationships between consultants. If the institution desires input into subconsultant selection, the prospective subconsultants should attend preliminary meetings with the primary consultants.

It is important to review the qualifications and reputation of any expert subconsultant, since the subconsultant's credentials may well represent a critically important component of the planning problem.

If the staff has a particular specialist with whom they have worked before and have confidence in, the staff may feel warranted in assigning them to the selected team. For example, if a particular engineering firm has extensive background in a school's utilities infrastructure, it makes sense to include this firm as part of the team.

Once the team is finally formed, the school should insist that a prime consultant take contractual responsibility and coordinate all contributing disciplines.

Identifying the Planning Committee

Once tasks and professional disciplines are identified, the next step is to identify those who should be involved in the process. Ninety percent of the APPA sample saw facilities administrators as needing to be involved (see Figure 4.4).

The overall success of the planning process, however, is dependent on incorporating the interests of many different constituencies. Physical development issues will be of great interest to facilities administrators, while faculty members will be most concerned with academic space programming. Strategies affecting campus image or requiring funding will interest administrators.

Considerable thought should go into the composition of the planning committee. People are needed who will be creative and willing to look at the broad picture, as well as their own particular area of interest (see Figures 4.5 and 4.6). Also important are the

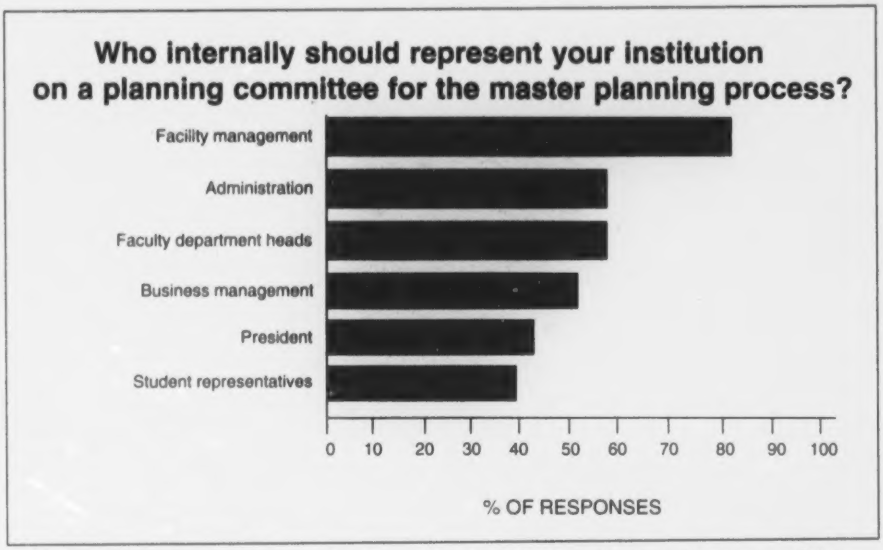

Figure 4.4. Persons to include on the institutional planning committee.

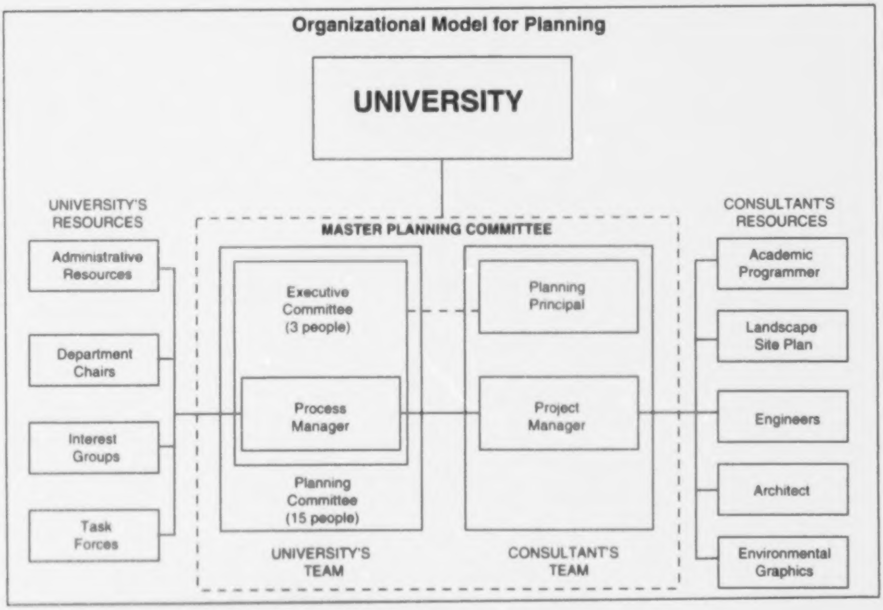
Organizational Model for Planning
UNIVERSITY
UNIVERSITY'S RESOURCES
Administrative Resources
Department Chairs
Interest Groups
Task Forces
MASTER PLANNING COMMITTEE
Executive Committee (3 people)
Process Manager
Planning Committee (15 people)
UNIVERSITY'S TEAM
Planning Principal
Project Manager
CONSULTANT'S TEAM
CONSULTANT'S RESOURCES
Academic Programmer
Landscape Site Plan
Engineers
Architect
Environmental Graphics

Figure 4.5. Organizational Model.

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dynamics of the people involved, how well they represent constituencies, and their ability to work on this type of project. Including some doers as well as thinkers in the process will improve the plan's chance of being implemented.

All members of the committee should be expected to come into the process with their own objectives and ideas, but an effective committee will consolidate each of these ideas in the process of coming up with one broadly accepted plan. It is important that everybody is on board and working in the same direction.

The size and composition of the team is significant in reaching a consensus. The planning committee itself should not exceed fifteen people, but to ensure "across-the-board" support, it is critical to involve representatives of many different constituent groups, including a member of the governing board.

In lieu of including representatives from every category, consider setting up task forces to advise the planning committee about particular issues. Involving these individuals will ensure that all interests are represented and that the plan is balanced and supported by all those who will be affected by the institution's long-range plans.

Planning can be lengthy, and those involved need to commit their time. Schedule meetings well enough in advance so that participants can be assured of attending. Missed meetings create an unfortunate dynamic that can compromise the outcome of the planning process.

Chief Executives

The chief executive (president or chancellor) is the final decision maker, and is extremely important to have on the committee. The president must be convinced of the validity of the plan because he or she will be the individual who will attempt to corner the board's approval; the master plan becomes moot if this attempt is not successful.

Make sure the president is included in as many meetings as he or she can attend (including all planning committee meetings). The president may carry his or her own agenda to the committee, and it is essential to understand his or her objectives.

Institution Involvement in the Master Plan

In addition to your consultants, you will want good representation from your institution, representing different aspects, including decision makers, doers and thinkers, users and perhaps some community leaders. The Planning Committee should comprise ten to fifteen people with a committee chair and a coordinator/liaison person. Others can be involved in the process through task forces, interviews, presentations, etc.

Title/Constituent Group	Planning Committee (identify individuals by name)	Other involvement (identify)
President		
Executive Vice President		
Development Officer		
Business Affairs Officer		
Academic Dean		
Facility Management		
Faculty Department Heads		
Dean of Students		
Student Representatives		
Staff Representatives		
Alumni		
Community Leaders		
Board Members		
Other --		
Other --		
Other --		
Other --		
Other --		

Figure 4.6. Groups to include in the planning process.

Facilities Administrators

Not surprisingly, 90 percent of facilities administrators in the APPA survey said they should be included in the planning committee. It is logical that facilities administrators be included, as they are the ones who deal with campus facilities on a daily basis, and they have a thorough knowledge of facility usage and problems.

Once the master plan process has begun, the facilities administrator acts as the on-campus liaison with the planning consultant. The facilities administrator must be part of the planning

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committee; excluding him or her from that committee means that significant practical knowledge is not available to the planning team.

Administrators

Administrative officers play a vital role on the planning committee by bringing their knowledge of university affairs to the table. These individuals understand student and faculty needs in a broad academic context, when areas need to be improved, and what should be done to attract new students. They should also be able to provide with classroom schedules and personnel information that can help in the space needs analysis. The provost in particular can bring much useful knowledge to the planning process, but business and financial administrators, development directors, and institution-wide deans also have much to offer.

Department Heads

As experts in their particular academic areas, faculty department heads often can make informed predictions about academic program trends. The planning committee needs this kind of input to determine how facilities should be used in response to the growth or decline of specific academic programs.

The college needs to know which academic areas should be bolstered to meet upcoming demands, and which should be given less attention due to declining enrollment projections. Balance must be maintained to avoid individual departments becoming fiefdoms.

Business Officers

Financial feasibility has to be taken into consideration by the planning committee and there is no better person to address this issue than the school's chief financial officer, or his or her key assistant.

Despite the business manager's expertise in finance, most financial officers are able to look at the broader aspects of the campus. They have a practical sense of what the college can expect to accomplish in a master plan. He or she will understand the numbers, the economic factors, and which direction the revenue base is headed.

If the facilities administrator does not act as the on-campus facilitator, the task usually falls on the business manager. The business manager, however, should ideally act as a regulator during the planning process, providing financial advice as each project is discussed rather than leading the process internally.

Student Representatives

While students were regarded as less critical for inclusion on the planning team, more than 40 percent of the survey respondents did indicate that getting student input was important for success. Ultimately, the students are the clients or customers the institution is serving, and their perspective is often unique.

Student representatives are usually selected from student government, since these students seem to have a more active interest in the well-being of the institution, are highly motivated and articulate, and can be counted on to participate actively in the process.

Typically, student concerns align closely with the issues to be addressed by the plan. They bring to the table concerns about safety and quality of campus life. They are also concerned about parking, accessibility and, in general, how easily they can get around the campus.

Alumni

Alumni should not be forgotten in the planning process. They have typically invested four or more years at an institution, and most are interested in the continued well-being of their alma mater. Alumni are a major source to tap for capital development funds, and a representative of this group may be able to help identify the most appropriate ways to reach this constituency.

Besides being funding sources themselves, alumni are often able to facilitate fund-raising, either through special events or through their positions on corporate boards and charitable foundations.

Key Businesses

Key local business people should be consulted periodically in an effort to maintain good relations with corporate partners and to recognize funding or other opportunities. Their involvement is important if the master plan is likely to propose changes that affect town and gown issues where the institution and the city must work together to achieve common goals.

Local business leaders and adjacent neighbors need to understand the reasoning behind every expansion move the college makes, particularly if the university plans to acquire property outside its current boundaries.

The planning decisions of a college or university can make or break a community and it is important that business leaders have reasonable access to prospective plans. Local business leaders can act also as a liaison between the college and the chamber of commerce.

Political Correctness

College campuses have shown leadership in giving voice to groups that have historically been ignored. The master planning committee should recognize this fact by first being alert to the issue of diversity among members of the committee itself, and second, by seeking input from campus advocacy groups. While it may not be necessary (or advisable) to include representatives of advocacy groups on the planning committee, task forces or special meetings should be considered to ensure their participation. If the campus has an advocacy group for people with disabilities, a representative of that group would be a logical addition to the planning committee.

5. MASTER PLAN ADMINISTRATION

When a master plan process is finally approved, there is usually some urgency associated with its implementation. Perhaps a major donation has been received for a new building and everyone is eager to get started—all that is needed is to identify the right site. Or, maybe a plan has been mandated by state government and has to be in place by a specific deadline, such as the start of the next legislative session, to ensure an appropriation is passed.

The scope of the plan, the size of the institution, and the number of people involved are all factors that will affect the length of time needed to implement the plan. It is important not to push the process too fast or let it drag out too long. Either will jeopardize the success of the plan.

Moving too quickly increases the risk that complicated issues will not be given a thorough review. Sometimes a planning committee will need time to absorb information and mull over ideas. Rushing judgments can result in decisions that will not hold. The schedule for the process must be carefully gauged to fit the personality of the institution.

On the other hand, too slow a process will make it difficult for participants to stay focused and sustain creative involvement. It may be difficult to retain the same participants over a long period,

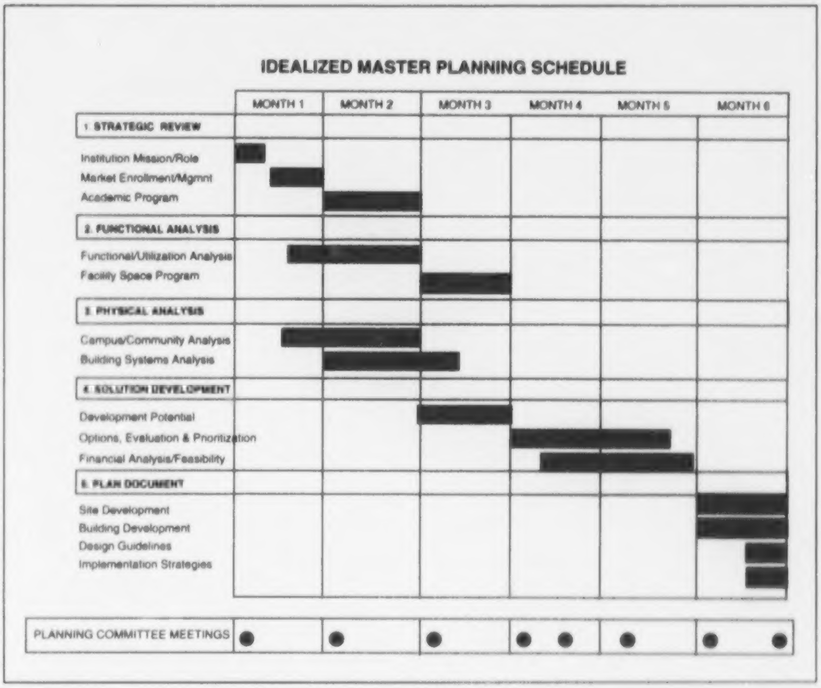

Figure 5.1. Master planning schedule.

thus requiring replacements who would need additional time to get up to speed.

Set a fairly aggressive pace, but be willing to add an extra meeting or two if you feel the pace is making the planning committee uncomfortable with their decisions. Remember that the master plan may very well be setting the institution's direction for the next ten to fifteen years. The consequences of these decisions are significant and adequate time should be invested to think through the repercussions.

A realistic amount of time for a comprehensive master planning process is from six to twelve months. Since some information can be developed concurrently, tasks can overlap to some degree. Figure 5.1 presents an idealized schedule for the master planning process. In addition to a schedule for the process itself, a schedule is needed for the activities and tasks leading up to the involvement of a consultant, as detailed in Figure 5.2.

Schedule

Involving so many players means that a good schedule is necessary to commit their time for key reviews and meetings around their academic and administrative commitments. This schedule must be managed initially by your institution to get the process started. Eventually your consultant will take over that management function once he/she is on board.

	Activity	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
PRE-PLANNING	**1. Set parameters for master plan**												
	• Review worksheets with key administrators												
	• Establish budget/scope of services												
	• Secure funding												
	• List potential consultants/internal participants												
	• Set schedule for consultant selection												
	2. Prepare mission statement												
	3. Select consultants												
	• Prepare RFP												
	• Review submittals/determine short list												
	• Conduct interviews and select consultant												
	4. Gather available documents												
PLANNING	**5. Strategic review**												
	• Institution mission/role												
	• Market enrollment/management												
	• Academic program												
	6. Functional analysis												
	• Functional/utilization analysis												
	• Facility space program												
	7. Physical analysis												
	• Campus/community analysis												
	• Building systems analysis												
	8. Solution development												
	• Development potential												
	• Options, evaluation and prioritization												
	9. Plan document												
	• Site development												
	• Building development												
	• Design guidelines												
	• Implementation strategies												
	PLANNING COMMITTEE MEETINGS												

Figure 5.2. Schedule for implementing the master plan.

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■ TIME COMMITMENT OF PERSONNEL

Even with the use of an outside consultant, some staff time must be committed to coordinate the effort. Task forces and planning committee members must make a commitment to attend review meetings throughout the process.

The time commitment of campus personnel may be substantial, perhaps as much as a quarter of their time in some cases, but without this level of dedication, the master plan's success will be jeopardized. The director of physical plant at one school estimated he spent 20 to 25 percent of his time simply coordinating the effort. Others have reported that master plan activities occupied up to a third of their time.

To help participants plan their schedules, be sure to schedule meeting times well in advance. The absence of participants disrupts balance and continuity and disturbs decision making. Repeated absences also slow the process considerably, because understanding the planning process requires cumulative knowledge.

Keep the academic calendar in mind when planning the meeting schedule. A hiatus such as a holiday or semester break will affect the availability of people. Summer can be an especially difficult time for bringing all committee members together.

■ COST

The amount of money required to create the master plan will depend not only on the services and products that have been defined, but also on the data already available for the consultants. Obviously, the more thoroughly executed the preplanning tasks are, the less consultant time will be required to get the process started.

Initial Costs

Having on hand accurate existing documents of the campus, its buildings, and how they are used will reduce the time consultants spend gathering information. If site and building plans are available on CADD, the consultant will require significantly less time to establish the base drawings for the plan.

The initial costs of planning must be viewed as a prudent investment. The master plan process will ensure that resources are used to acheive the most important goal: physical assets will be adapted to support strategic goals. Good planning can actually create economies by avoiding some expenditures altogether and reducing others by avoiding overlapping and repetition.

Figure 5.3 depicts the potential savings that can be realized by planning ahead. Making the right decisions early in the process, rather than waiting until later, can reduce the costs greatly.

As the graph demonstrates, the greatest potential for savings is at the schematic design process, because during this phase revisions are relatively inexpensive. Planning decisions made early on avoid mistakes later. Planning is a good investment—it

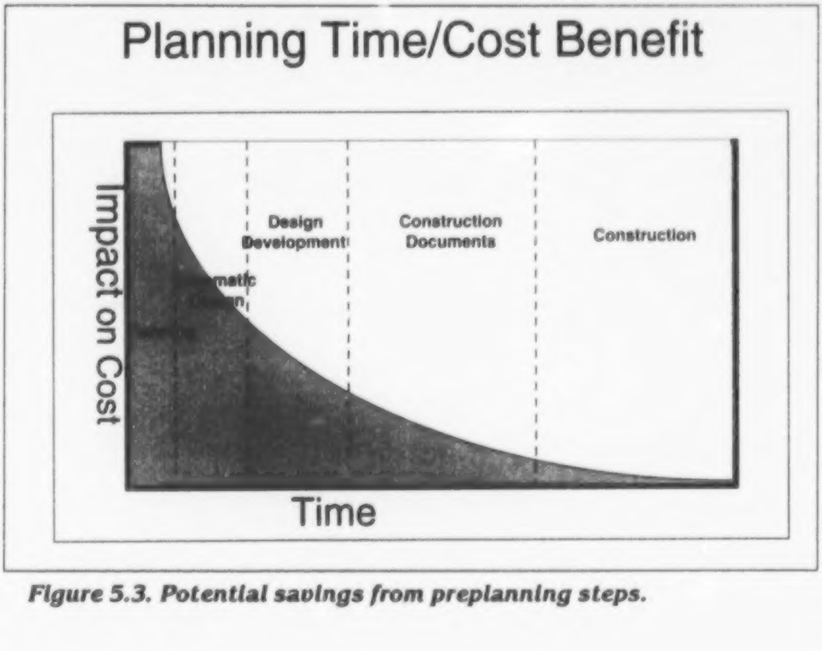

Figure 5.3. Potential savings from preplanning steps.

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may cost some time and money initially, but will save considerable time and money in the long run.

Estimated Costs

A number of variables affect the overall price of master planning services, but a comprehensive plan can range from a little under $100,000 to over $300,000, based on the scope of the project and the breadth of the consultant team selected.

Consultant selection will be addressed in Chapter 6, but as a general rule, avoid choosing a consultant based on price alone. What seems like a great deal on the product may not buy much of a process in return. On the other hand, what may seem like an expensive fee could well be worth every penny if the result is accepted and used for years to come.

The real issue for most colleges is to get the best value for a price that fits into an attainable budget. This is a practical consideration and, in today's climate of financial constraints, a necessary one. In many cases, what constitutes an attainable budget is based on preconceptions held by a school's chief financial officer or president. If the facilities administrator is initiating the planning process, he or she must either work within the confines of these preconceptions or work to change them. While the latter course is preferable in many ways, it is also the more difficult of the two.

Typically, the facilities director is responsible for managing the planning budget, but he or she may be unaware of how to budget for a master plan. A way to get a better handle on how much might be spent is to identify what services are needed, then identify other institutions that have recently undergone similar master plans. Most other schools (with a few exceptions) will share scope and fee information with their peers. If the cost of planning is unknown, it will be extremely difficult to secure funding. Use the worksheet in Figure 5.4 to help determine budget and funding estimates.

Comparison of Costs Based on Projects

The cost of a master plan should be regarded as an investment instead of an expense. At the very least, it will save money on projects and it can be used to leverage funding or donations to the college.

Keep in mind that the institution is not purchasing a commodity or a product. The fee is largely to pay for the time of professionals (and the per hour cost of professional time does not vary much), so the key to getting good value is to make sure the professional's time is focused on the issues that are most important to your situation.

Figure 5.5 presents seven master plans as examples, including their scope, time frame, end products, and total fee. Two unseen variables represented in this chart are:

- The size and relative complexity of the campus.
- The base information provided by the institution.

These factors affect cost because they both represent an expenditure of consultant time.

To distinguish the difference between the high and low numbers in Figure 5.5, compare the number of comprehensive tasks (solid dots) completed and the end products of each.

FUNDING THE MASTER PLAN

Funding is a necessary precondition of all master plans. It does not matter how good the school's intentions may be, without the required funding a plan will not come into being. Lack of funding often leads to do-it-yourself master plans which, as pointed out previously, do not usually achieve the desired result.

Unfortunately, funds for master plans are harder to come by than funds for other projects. Normal funding sources tapped regularly for "bricks and mortar" projects often are not available for concept plans. Ironically, some of these same sources (i.e., state legislatures) require master plans before construction appropriations are made.

Master Plan Budget and Sources of Funds

Another key to getting the planning started is to determine the budget and secure the necessary funding. The list of services and end products will help you to determine a realistic budget. It may be necessary to spread the planning process over several fiscal years by identifying a piece to be accomplished each year, which means that you will have to modify your schedule to reflect this.

Budgeted Expenses	Total	1st Year	2nd Year	3rd Year
Consultant Fees (Basic Services)				
Planner/Facilitator Team				
Reimbursables				
Other Consultant Costs				
Additional Services (Renderings, Model, Video)				
Site Survey				
Special Consultants				
Code Consultant				
Financial Advisor				
Project Administration/Management				
Administrative Costs				
Reproduction of Final Documents				
Other Project Costs				
Financing				
TOTAL *				
Funding Sources				
Institution Resources				
Specially allocated funds				
Capital improvement allocations				
Others				
Fund raising/Donations				
Grants				
TOTAL *				

* *These two totals should be the same amount.*

Figure 5.4. Master plan budget and funding worksheet.

Campus Master Plans
Scope and Cost Comparison

	St. Louis Univ.	Univ. of Indian-apolis	George-town College	Webster Univ.	Univ. of MO-St. Louis	Butler Univ.	Maryville Univ.
Year of plan	1989	1991	1992	1993	1993	1995	1995
COMPONENTS							
• Strategic Plan			○			*	
• Academic Plan			●			*	○
• Space Needs Assessment			●	○	●	●	●
• Building Quality Assessment			●			●	●
• Building Condition Assessment			○	●		○	
• Accessibility Analysis			●			●	●
• Space Utilization Analysis	○		●	●		●	●
• Site Analysis	●	●	●	●	●	●	●
• Traffic/Parking Analysis		●	○		●	*	○
• Landscape Analysis - Detailed	○	●	●			●	●
• Campus Systems Analysis			●			●	●
• Site Development Plan	●	●	●	●	●	●	●
• Land Use Plan	●	●	○	○	○	●	○
• Building (Design) Guidelines			●			●	●
• Building Utilization Plan		○	●	●		○	●
• Property Acquisition Plan	●		●		●	○	
• Landscape Plan	○	●	●			●	●
PROCESS							
• Planning Committee		○	●	○	●	●	○
• Executive Planning Committee	○	●	●	●	●	●	●
• Coord. with External Authorities	●					●	
• Mandated (State) Process							
DURATION	6 weeks	8 months	10 months	6 months	11 months	9 months	6 months
FEES	$60,000	$25,000	$176,000	$96,000+	$135,000+	$159,000	$117,000
PRODUCTS	8-1/2x11 report, large format slides		11x17 full color report, rendering, overhead slides, large format boards	11x14 report large format graphics	8-1/2x11 report with detailed appendix	11x17 full color report, graphics, slides, rendering	11x17 full color report, slides, large format graphics

○ Partial ● Comprehensive * Previously completed

Figure 5.5. Cost comparison for master planning. (Copyright © 1995, The Christner Partnership, Inc.)

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The key to funding a master plan is to be creative and aggressive in the search for resources. Find out how peer institutions funded their plans, or how they lessened the blow by dividing the plan over more than one budget cycle.

Since funding is the fuel for your trip, you will be stuck at home without it. So don't give up if funding does not come easily during your first efforts. The money is out there; it just takes some time to find.

Funding Sources

Some examples of funding sources for master planning are:

- Budgeted allocations from operating funds (plan ahead).
- Capital improvement budgets, which are often too small to do any significant construction, but which may be just right for planning.
- Special appropriations for state-supported institutions.
- Special fund drives, including capital campaigns for projects already in the pipeline.
- Proceeds from the sale of an asset.
- Grants from agencies or foundations sympathetic to the idea of planning.
- Borrowing against bond revenue or other financial instruments.

The development office should follow in the wake of the planning effort to key in on fund-raising opportunities. Involving local businesses in the process may offer an opportunity to meet some of their needs in combination with those of the institution, generating income in the future. At the very least, such an approach can keep them interested and involved with the institution.

One suggestion is to hire a professional fund locator. This individual is an expert in finding and matching obscure but sound funding sources with institutions. Fund-raising consultants have also been used to identify funding sources for master planning.

OBTAINING THE FUNDING

Funding is one of the biggest obstacles in conducting a master plan, but whether you are searching internally or externally for the resources, firm funding commitments must be obtained before you proceed with the plan.

As mentioned earlier, most institutions do fund master plans through internal resources, but convincing the board to spend from $100,000 to $300,000 for a conceptual plan is often just as hard as looking for outside assistance. Following are some suggestions for overcoming this obstacle.

Selling the Master Plan to Internal Funding Sources

Convincing the institution's board that master planning is important is vital before they will be willing to commit funds to it. If the board will not support the master planning effort, commitment to the end result will obviously be minimal.

In previous chapters, we discussed how to present the master plan to the administration to convince administrators that the benefits and long-term savings far outweigh the initial cost of the plan.

If the board supports the idea of a master plan, and there is general agreement that such a plan is needed, the next step is asking for the money. Facilities people know their administration and board better than any outside consultant, and so should have a better understanding of the availability of the needed resources.

Background research is essential to presenting a compelling case for funding a master plan. Especially useful is a year-to-year budget comparison. Identify previous year accounts in which expenses fell short of projections, then determine the likelihood of future recurring surpluses. Calculate these numbers and present these findings to the administration and board.

Another useful exercise is to compare funding for a master plan to the annual budget planning cycle. Every year, an institution decides how to allocate funds according to institutional priorities. Facilities master planning can be viewed as the process of aligning finite physical resources (buildings and grounds) to support institutional goals. Considering how much of the value of the institution's balance sheet is embodied in buildings and land, it can be a revelation that generally much more time and effort is spent on general financial planning than on planning for the physical plant itself. In this revelation is the justification for funding a master plan.

Section III: *Selecting Consultants*

6. THE SELECTION PROCESS

The decision of which consultant to hire to lead the master planning process is critical. This party will facilitate the process, provide insights from other institutions, and provide a significant measure of creativity. Selecting the right consultant is imperative if the planning process is to go smoothly.

Selecting a consultant is a little like hiring a new coach for your basketball team. It does not matter how good the team is or how good the coach is if they take opposing views of how the process should be facilitated.

The selection process requires a significant amount of attention. Remember, the consultant will be spending a great deal of time with the planning committee over the course of the next six to twelve months, and the institution will be paying a sizeable amount in professional fees. It behooves a school to move deliberately and choose carefully.

■ SEARCHING FOR PROFESSIONALS

The more professional the search, the better the results will be. The traditional, reliable method of selection begins with the request for qualifications (RFQ), followed by an interview process. While this is an appropriate way to begin the search, consider taking a more active role in the process.

The formal submittal and formal interview and proposal are somewhat superficial in terms of the real issues that should be considered. Do not base decisions solely on what appears to be a thorough beginning process by the firm—it may in fact take a great deal for granted. Instead, try to learn more about the firm and its consultants. Such issues as personal chemistry, creativity, and the firm's approach to planning are more likely to come out in a visit to the prospective consultants' offices, or by having them come in and conduct a short, interactive workshop on their ideas. It is easy in this day of high-powered professional marketing to package a set of perceptions that are irrelevant to the task at hand.

The Request for Qualifications

The request for qualifications (RFQ) can tell potential consultants a lot about an institution. As a general rule, the more thorough the RFQ, the better the responses received are likely to be. In order for prospective consultants to respond, they have to know the institution and its mission.

Determine what factors are most important. If the process is more important than the end product, ask the consultants to describe the process they will use to develop the plan. The RFQ should include or refer to all the information gathered in the pre-planning process (see Figure 6.1), such as:

- Mission and profile of institution
- Purpose of the master plan
- Key issues
- Available documents
- Scope of services
- Project management

Also, you need to include the basic requirements for submission proposals and the desired format. Advise consultants of the selection process schedule, giving them relevant deadline and decision dates, and tell them the criteria upon which the selection will be based.

Request for Proposal Outline

All the data you've acquired on the previous worksheets will help you to write the RFP for professional services. It will explain your needs, aspirations and requirements. This outline will help you compose this material into a good RFP.

Mission and Profile of Institution/Campus
Include basic information such as mission, enrollment, academic programs, acreage. See Mission/Purpose of Institution worksheet in Figure 3.2

Purpose of Master Plan
Include information identified on Uses for the Master Plan and End Products (see Figure 3.4).

Key Issues
Include enough information for consultant to present a realistic schedule and fee, including required deliverables. Include invitation to visit the campus, with name of contact to call to arrange visit. Refer to these worksheets: Issues and Priorities (Figure 3.3), Project Budget and Funding Sources (Figure 5.4), Schedule (Figure 5.2).

Available Documents
Include list of available reference materials as identified in Figure 4.2.

Scope of Services
Include list of services required by planning consultant. See Master Planning Services (Figure 4.2).

Project Management
Include client representation, contracting officer, liaison/contact person, planning committee, board involvement as on worksheet on Institution Involvement in the Master Plan (Figure 4.6).

Proposal Submission Requirements

Cover letter dated and with signature of a representative of the firm authorized to negotiate contracts.

Table of contents.

1. Firm information (name, address, phone and fax numbers, brief history)
2. Relevant experience - list of campus master planning projects.
   Present in detail two master plans of similar scope completed in the last five years, including two contact names (with address and phone number).
3. Team - overall explanation of team structure, including sub-consultants, plus qualifications and experience of key team members.
4. Approach to this master planning project (including your philosophy of master planning).
5. Schedule.
6. Fee range and approach to establishing fee.
7. Any other information.

Format
- Submit on 8 1/2" x 11" standard paper.
- State number of copies required.
- Include address for mailing, and name and phone/fax of contact person.

Selection Process Schedule
- Submittal deadline - give date and time. If requiring/prohibiting a faxed copy, state this. If to be faxed, state requirement for hard copy to follow (and by when).
- Shortlist announced - give date.
- Interviews - give date(s).
- Final decision - give date.

Figure 6.1. Outline for preparing a request for proposals.

The list of potential consultants is derived from the services the master plan will encompass. To make an informed decision, the first question to be asked is: "What factors are important for our situation?"

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Consultant Involvement in the Master Plan

Once you know what services you're going to include in your master plan, you'll need to identify what consultants are required to perform those services and the appropriate qualifications they will need to do your plan.

Consultant	✓	**Potential Consultants**
Lead planner/facilitator		
Architect		
Mechanical/electrical engineer		
Structural engineer		
Civil engineer		
Landscape architect		
Interior designer		
Financial advisor		
Academic planner		
Real estate advisor		
Construction advisor		
Technology advisor		
Environmental impact		
Accessibility		
Code		
Cost estimator		
Surveyor		
Historical advisor		
Site graphic		
Other –		
Other –		

Figure 6.2. Worksheet to determine consultant involvement.

Experience in master planning and knowledge of educational issues are fundamental; a consultant should be sought who is an acknowledged expert at master planning. While architectural design knowledge for educational facilities is an asset, it is wise

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to make a clear distinction between designing a building and campus planning. All architects claim to be master planners, but not all approach planning with the discipline and principles of a separate professional service.

The entire team warrants close scrutiny, including associated consultants such as engineers or academic planners. It will be individual people who will do the project—so look beyond firm credentials. Older firms can produce impressive lists of past clients—look at individual resumes to determine which clients are relevant to current personnel.

Figure 6.2 lists a number of potential consultants, covering a wide range of services. Go through the list and mark what type of advisors are needed, based on the goals set forth for the master plan. There is a variety of ways to configure the team, but the owner must make decisions early on about the conceptual makeup of the team. A list of desired subspecialties should be included in the RFQ.

Can the project be done solely by a physical planning firm, or will an academic planner be needed as well? If plans call for acquisition of property or other community issues, a public relations consultant may be needed to help organize communication efforts.

Consider hiring one firm as a prime consultant and having them find the appropriate subconsultants. This course of action may save considerable time. However, the internal process manager should still insist on approving the subconsultants.

■ EVALUATION OF RFQ RESPONSES

The matrix in Figure 6.3 provides characteristics to consider when selecting a consultant (down the left-hand side), and suggestions on how this information can be obtained (on the right-hand side).

The pie chart in Figure 6.4 reflects the proportional amount each consultant characteristic should carry.

Consultant Selection

FACTORS	SOURCE FOR ASSESSING FACTORS							
	Formal Interview	Qualifs. Submittal (Team/ Personnel)	Proposed Proposal (Scope/ Fee)	Process Plan/ Schedule	Visit to Consult-ant's Office	Campus Visit/ Informal Discussion	References from Clients	Review of Sample Master Plans
Experience in Master Planning		●				●	●	●
Knowledge of higher education issues						●	●	●
Design/creativity					●	●	●	●
Communication skills	●				●	●		
Chemistry	●				●	●		
Project Management/ Responsiveness		●		●			●	
Tailored Approach				●		●		
End Product (Quality)							●	●
Location Convenience					●			
Fee/Value			●				●	●
Subconsultants		●						

Figure 6.3. Matrix for consultant selection.

Chemistry

Every institution has a unique character, an essence that describes its personality; finding a consultant to match this individuality is not easy, but you will know intuitively when there is a match. This intuitive matching of personalities is the good chemistry that can make the process lively and inspiring for all participants.

If there is a good fit between an institution and the consultant, the outcome will be a much better process and decisions. A consultant who shares the same goals and values as the school will understand they are not only performing a service but making a contribution to meet a mutually desired goal.

The working elements of an institution's in-house planning team and the consultant's personnel must be compatible. By spending time with and getting to know the consultants, you will develop a feel for their communication style and an indication for how you will get along for the duration of the planning

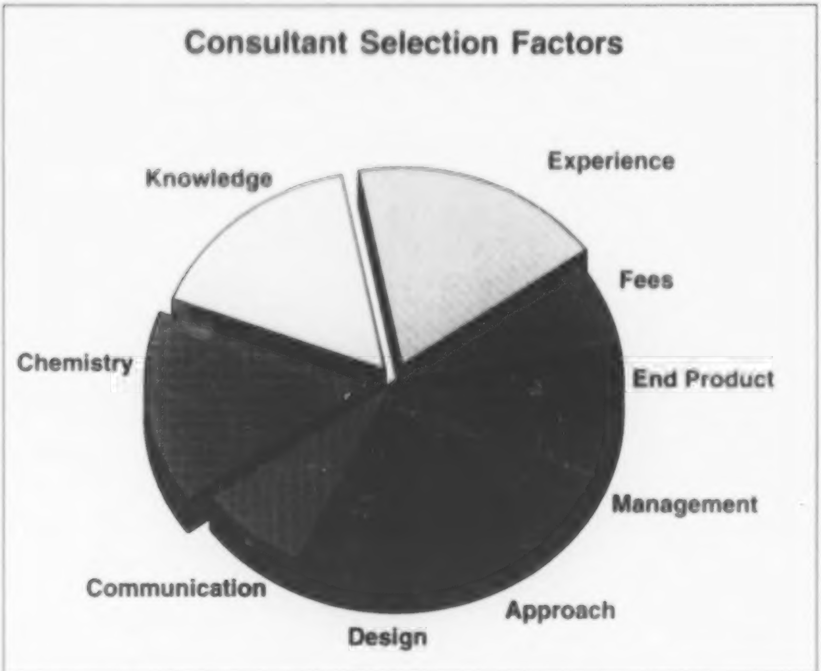

Figure 6.4. Chart of consultant selection factors.

process. There have been many projects that have failed solely because of poor chemistry and related communication issues.

It is also important to meet the individual who will serve as the day-to-day contact. This is where the chemistry is most crucial. Do not be won over by meeting just the "front" people from the firm. Insist on meeting all team members with whom you will actually have to interact.

Communication

The ability to communicate effectively and efficiently should weigh heavily in the selection of a consultant. A master plan is not primarily about bricks and mortar. It is about communicating a set of concepts, and if the process leader (consultant) cannot communicate effectively, plans can quickly begin to unravel.

Consultants must be able to express their ideas clearly in a way that ordinary people can understand them. Understanding master planning is one of the biggest obstacles that must be overcome to win support for the plan.

Good communication skills are imperative for consultants, who must address community leaders and faculty as they attempt to extract information or gain support. They must understand what the people involved are saying in order to be effective.

Experience

The bottom line here is that your institution does not want to be a consultant's "guinea pig." Look for a consultant who has proven, solid experience in completing similar master plans for colleges or universities. For instance, a consultant may possess good master planning skills, but might not have experience with educational institutions. So it is important that they have relevant experience in your particular type of environment.

Another element to be considered when evaluating experience is the firm's dedication to master planning. Some firms, particularly architectural firms, just use master planning as an avenue to generate building commissions. Steer clear of these consultants.

The problem with the latter type of firm is a lack of objectivity about development needs. Make sure the selected consultant is serious about looking at all the possibilities, including the possibility of recommending no further development.

Design and Creativity

Design and creativity are two basic components of a well-qualified consultant. People do not want someone to identify only the obvious solutions; a fresh eye can come in and challenge an entrenched way of thinking. Of course, creativity must be balanced with a respect for tradition and history.

A good consultant will be able to identify options not considered before. While this may mean that previously discarded ideas may resurface, an outside eye helps to make sure nothing is being missed. And if there is a return to previous ideas they will have been validated. The resulting confidence in their validity is enormously powerful in moving forward.

Approach

One approach does not fit all. Be cautious of consultants who come with ready-made solutions, capable of addressing all problems at any institution. These consultants tend to fit institutions into their preconceived mold, which does not serve any individual campus very well.

All campuses are different. Just as one size and type of suit will not fit every person, there is no single master plan that will be appropriate for every institution. Each has a different mission and institutional culture, and each varies in physical composition. The plan must be tailored to meet specific needs.

Management

The right consultant project manager can often make all the difference in the world over a six- to twelve-month period. No one likes working with someone with whom they are incompatible. The project manager must be competent, dependable, and a good listener who is willing to take the time to understand the client's needs and concerns. Attention to detail and follow-through is critical.

The project manager should be a good communicator, a leader, capable of managing a team while facilitating the process by meeting deadlines and staying within budget constraints.

End Product

In order to determine what type of end product a consultant puts together, secure a document from another institution that used that consultant. Reviewing a document for another institution provides an opportunity to assess whether the consultant will meet your needs. The end product must fully accommodate the institution's mission and goals. Anything short of that is unacceptable.

Location

The consultant's proximity to the institution should not be a major factor in the selection decision. The most important selection criteria are expertise and chemistry. The consultant's location is less important, because with the master plan the consultant attends scheduled meetings, and the nature of the project is such that there is not a lot of site work. A local consultant, however, may be a political necessity in some instances.

Scheduled meetings allow the most productive use of the consultant's time. The consultant will typically spend several days assessing the campus, developing a feel for building sites and other issues. Staff and faculty interviews are conducted during these visits. Making the best use of consultant visits can discipline the process to make more efficient use of everyone's time.

Fees

The one ingredient often over-emphasized when considering master planning consultants is the fee. Fee comparisons are difficult because of differences in scope. Choose the consultant who will do the best job and then work on negotiating a fair fee. It is still important to research fees paid by other institutions to get an idea of reasonable fee ranges for various levels of service, and to assess that the consultants are proposing a reasonable fee.

NOTIFYING AND DEBRIEFING CONSULTANTS

Once the consultant is tentatively selected, be sure to notify all of the competing consultants in a timely manner. It is common business courtesy to contact all firms considered and to explain to them how the selection process proceeded and how they were viewed. Consultants whose bids are unsuccessful are often interested in feedback about their strong and weak points, and want to know exactly where they fell short. Providing them with this information is helpful to the consultant and offers you another opportunity to pick up further information. It also helps maintain a good connection with a consultant who may be considered for other work in the future.

■ CONTRACT NEGOTIATIONS

Contracts can be set up in a variety of ways. Larger institutions usually have rigid procurement procedures, while smaller ones may use contracts furnished by the consultant. The most important factor in composing a contract is to spell agreements out carefully so that there is no confusion about what is expected, what will be provided, and in what time frame things should be done. The contract should recognize, however, that as a professional service the timing of a plan can change.

■ PLANNING FOR KICK-OFF MEETING

After selecting the consultant and signing the contract, the master planning process can begin. The first task is to put together a "kick-off" meeting at which the planning committee should be fully identified and introduced to the consultants. This meeting is an opportunity for everybody involved to meet all the players, if they have not already done so.

Take this opportunity to once again review the overall schedule and scope of work to be completed. The kick-off meeting is an ideal time for all involved to schedule the major review meetings, recognizing that administrators' calendars fill up months in advance. It is also a good time to validate the key issues identified in the preplanning phase as drivers for the master plan.

CONCLUSION

This current period of redefining the college mission and restructuring the institution is characterized by increasing competition for resources amid the clamor of demands on facilities.

In this environment, master planning is being increasingly recognized as an indispensable management tool. A master plan can be a valuable ally to help facilities managers face problems and issues in an increasingly complex world.

■ REVIEWING THE MASTER PLAN: A PROCESS MORE THAN A PRODUCT

There is a side to some facilities managers that would like to be done with the master plan after the document is published. It is tempting to trust that the plan will serve the institution for the next twenty-five years, but this is an unrealistic expectation. A comparable issue is that of the annual budget—imagine how imbalanced the budget would be if it were the same for twenty-five years. As long as the context and issues evolve, as they inevitably do, the master plan itself must be viewed as an evolving document.

The plan must be adaptable to changing conditions. The master plan is not frozen in time with the end of the formal process. In fact, it should be revisited every few years, particularly when there is a change in context, such as new leadership, new programs, or increased competition.

■ THE TWENTY-FIRST CENTURY

The twenty-first century will bring new challenges to higher education. The livelihoods of educational institutions hang in the balance of unknown and economic and governmental conditions over which facilities directors have no control, but which will inevitably influence campus management. Being prepared for this future requires planning ahead, looking forward into a future of unknown factors, and attempting to maintain control over those variables that are within one's reach.

Master planning facilitates this effort. Institutions that conduct master plans today will have a systematic mapping process to accommodate tomorrow whatever physical and economic challenges the future presents. By preparing now, the institution can act and respond in sophisticated ways to future changes. Planning for master planning is the first step to responsible, effective guardianship of the resources vital to educating tomorrow's workers and leaders.

RESOURCES

APPA: The Association of Higher Education Facilities Officers. *Capital Renewal and Deferred Maintenance.* (Critical Issues in Facilities Management series, no. 4.) Alexandria, Virginia: APPA, 1990.

——. *Comparative Costs and Staffing Report for College and University Facilities.* Alexandria, Virginia: APPA, biennial.

——. *Facilities Stewardship in the 1990s.* Alexandria, Virginia: APPA, 1991.

——. *Operations and Maintenance.* (Critical Issues in Facilities Management series, no. 8.) Alexandria, Virginia: APPA, 1992.

——. *Planning, Design, and Construction.* (Critical Issues in Facilities Management series, no. 7.) Alexandria, Virginia: APPA, 1990.

——. *Planning for Improved Campus Facilities.* Alexandria, Virginia: APPA, 1992.

APPA and Lilly Endowment, Inc. *Today's Challenge to Tomorrow's Vision: A Study of Facilities Conditions at Schools of Theology.* Alexandria, Virginia: APPA, 1991.

Arrendondo, Lani. *How to Present Like a Pro.* New York: McGraw-Hill, 1991.

Beck, Mark W. "Campus Facility Site Selection and Matrix Evaluation of Weighted Alternatives: A Methodology." *Planning for Higher Education,* 17:4, 1989.

Biehle, James. "Successful Master Planning." *Planning for Higher Education,* 19:4, 1991.

Blackett, Anthony and Brenda Stanfield. "A Planner's Guide to Tomorrow's Classrooms." *Planning for Higher Education,* 22:3, 1994.

Boyer, Ernest L. "Facilities and the Academic Mission." *Facilities Manager,* Winter 1988.

Brandt, Robert B., and Leevi Kiil. "Design Approaches to the Special Challenges of Academic Facilities." In *Proceedings of the 76th Annual Meeting of APPA.* Alexandria, Virginia: Association of Physical Plant Administrators, 1989.

Brase, Wendell. "Integrating Physical Planning with Academic Planning." *Planning for Higher Education,* 16:4, 1988.

———. "Design Criteria for Effective Classrooms." *Planning for Higher Education,* 17:1, 1988.

Braver, Roger L. *Facilities Planning.* Washington, D.C.: American Management Association, 1986.

Bryson, John M. *Strategic Planning for Public & Non-Profit Organizations: A Guide to Strengthening and Sustaining Organizational Achievement.* San Francisco: Jossey-Bass, 1988.

Chapman, M. Perry. "Social Change and American Campus Design." *Planning for Higher Education,* 22:3, 1994.

The Christner Partnership, Inc. "Planning For Master Planning." APPA workshop presented by John R. Reeve, Marion B. Smith, Beth Worthington, and Deborah Shepley, March 4-5, 1994, St. Louis, Missouri.

——. "Planning For Master Planning." APPA workshop presented by John R. Reeve, Marion B. Smith, and David B. Greusel, March 1-2, 1995, Indianapolis, Indiana.

——. "Master Planning." Roundtable panel discussion with John R. Reeve, Marion B. Smith, Jim Roberts, Karen Luebbert, Jim Edson, and Chuck Smith at 1994 annual meeting of APPA: The Association of Higher Education Facilities Officers, San Antonio, Texas.

——. "1993 APPA Survey." Conducted by The Christner Partnership, Inc., St. Louis, Missouri.

——. "1992 CAPPA Survey." Conducted by The Christner Partnership, Inc., St. Louis, Missouri.

Clotfelter, Charles, et al. *Economic Challenges in Higher Education.* Chicago: University of Chicago Press, 1991.

College of DuPage. *College of DuPage Planning Process: College of DuPage Planning, the Foundation for Decision Making.* Glen Ellyn, Illinois: College of DuPage, 1993.

Dahill, Charles F., John Dunkerly, and Jeffrey A. Turner. "Construction Cost Management in the Public Sector." In *Proceedings of the 76th Annual Meeting of APPA.* Alexandria, Virginia: Association of Physical Plant Administrators, 1989.

Daigneau, William A. "At the Crossroads." *Facilities Manager,* Winter 1995.

Day, Duane, and Tim Lewis. "Establishment and Application of a University Standards Policy." In *Proceedings of the 79th Annual Meeting of APPA.* Alexandria, Virginia: APPA, 1992.

Dews, E. A. "Approaches to Physical Resources Planning: A Planning Administrator's View." *Journal of Tertiary Educational Administration,* October 1982.

——. "Value Analysis of Competitive Bids for Consultant Services." In *Proceedings of the 1993 Educational Conference and Annual Meeting of APPA.* Alexandria, Virginia: APPA, 1993.

Dews, Ted, and Sam Ragusa. "Site Planning and Management: An International Review." In *Proceedings of the 77th Annual Meeting of APPA.* Alexandria, Virginia: APPA, 1990.

Dill, David. "Rethinking the Planning Process." *Planning for Higher Education,* 22:2, 1994.

Dillow, Rex O., ed. *Facilities Management: A Manual for Plant Administration,* second edition. Alexandria, Virginia: Association of Physical Plant Administrators, 1989.

Dober, Richard. "About Campus Lawns." *Planning for Higher Education,* 20:4, 1992.

———. *Campus Design.* New York: John Wiley & Sons, Inc., 1992.

Dunn, John A. Jr. *Financial Planning Guidelines for Facility Renewal and Adaption.* Ann Arbor, Michigan: Society for College and University Planning, 1989.

——. "Will Your Walls Come Crumbling Down?" *AGB Reports.* November/December 1990.

Eaton, Judith. "The Coming Transformation of Community Colleges." *Planning for Higher Education,* 21:1, 1992.

Eckstut, Stanton, and Ezra Ehrenkrantz. "Dos and Don'ts of Historic Preservation on Campus." *Planning for Higher Education,* 23:2, 1995.

Einhorn, Steven, and Jim McKinney. "Adapting Old Buildings for New Uses." *Facilities Manager,* Winter 1992.

Freeman, Alan Charles, William D'Elia, and Kimberly Woodard. "New Town-Gown Planning." *Planning for Higher Education,* 21:1, 1992.

Gaines, Thomas A. *The Campus as a Work of Art.* New York: Praeger Publishers, 1991.

Gaskins, Wain. "Selecting a Campus Planning Consultant." *Facilities Manager,* Spring 1992.

Glazner, Steve, ed. "Planning, Design, and Construction." Theme issue of *Facilities Manager,* Summer 1995.

Goncalves, Karen. "Those Persons Who Do Your Planning." *Planning for Higher Education,* 20:2, 1991.

Heidler, Clare D. "Life Cycle Costing: Getting Approval for the Budget You Need." In *Proceedings of the 1994 Educational Conference and Annual Meeting of APPA.* Alexandria, Virginia: APPA, 1994.

Hewitt, Clinton N. "Facilities Planning and Space Management." In *Facilities Management: A Manual for Plant Administration,* second edition. Alexandria, Virginia: Association of Physical Plant Administrators, 1989.

Hodges, Chris. "Understanding the Life Cycle of Buildings and Structures." In *Proceedings of the 1994 Educational Conference and Annual Meeting of APPA.* Alexandria, Virginia: APPA, 1994.

Hughes, K. Scott, and Daryl Conner, eds. *Managing Change in Higher Education: Preparing for the 21st Century.* Washington, D.C.: College and University Personnel Association, 1989.

Johnson, Carol. "Approaches to Contemporary Campus Landscape Design." *Planning for Higher Education,* 22:2, 1994.

Kaiser, Harvey H. *The Facilities Audit: A Process for Improving Facilities Conditions.* Alexandria, Virginia: APPA, 1993.

Kaiser, Harvey H., ed. *Managing Facilities More Effectively.* (New Directions for Higher Education Quarterly.) San Francisco: Jossey-Bass, 1980.

——. *Planning and Managing Higher Education Facilities.* (New Directions for Institutional Research.) San Francisco: Jossey-Bass, Inc., 1989.

Knipe, Edward C. "Utilities Master Planning in the Campus Setting." In *Proceedings of the 77th Annual Meeting of APPA.* Alexandria, Virginia: APPA, 1990.

Lardner, Lawrence J. "Facility Planning—Turning the Tide." In *Proceedings of the 1993 Educational Conference and Annual Meeting of APPA*. Alexandria, Virginia: APPA, 1993.

Lewis, James Jr. *Long-Range and Short-Range Planning for Educational Administrators.* Boston: Allyn and Bacon, 1983.

Lott, H.C. "Report of the APPA Task Force for Planning and Construction of Higher Education Facilities." *APPA Newsletter,* June 1992.

Love, William R. Jr. "Master Planning Techniques for Success." In *Proceedings of the 79th Annual Meeting of APPA*. Alexandria, Virginia: 1992.

Mayer, Frederick W. "The Campus Infrastructure." In *Facilities Management: A Manual for Plant Administration,* second edition. Alexandria, Virginia: Association of Physical Plant Administrators, 1989.

McFaul, Thomas R., Richard J. Wilders, Paul H. Loscheider, and Richard J. Luzeze. "Proactive Planning in a Small College Setting: Using a Computerized Planning Model to Project Alternative Futures." *Planning for Higher Education,* 16:3, 1988.

Milgrom, Gail, and Elizabeth Sisam. "Bridging the Gap Between Space Standards and Space Allocation: A Methodology." *Planning for Higher Education,* 16:2, 1987.

NACUBO. *Managing the Facilities Portfolio.* Washington, D.C.: National Association of College and University Business Officers, 1991.

Nanus, Burt. "Visionary Leadership: Creating a New Tomorrow." *Facilities Manager,* Winter 1995.

Newsom, Walter, and C. Ray Hayes. "Are Mission Statements Worthwhile?" *Planning for Higher Education,* 19:2, 1990.

Norris, Donald, Edward Delany, and Kenneth Billingsley. "America's New Cities and the Universities." *Planning for Higher Education,* 19:1, 1990.

Norris, Donald M., and Nick L. Poulton. *A Guide for New Planners.* Ann Arbor, Michigan: Society for College and University Planning, 1991.

Owu, Michael. "Classrooms for the 21st Century." *Planning for Higher Education,* 20:3, 1992.

Pascarella, Ernest, and Patrick Terenzini. "Designing Colleges for Greater Learning." *Planning for Higher Education,* 20:3, 1992.

Planning Guidelines and Evaluation. Institutional Effectiveness Series: 6. Tucson, Arizona: Pima County Community College District, 1994.

Purcell, James, and Frank Schmidt. "Coping with the Changing Student Population in the 1990s." In *Proceedings of the 78th Annual Meeting of APPA*. Alexandria, Virginia: APPA, 1991.

Rand, Paul. "The Chaos of Modern Design." *Planning for Higher Education,* 21:1, 1992.

Reeve, John R., and Marion B. Smith. "Planning for Master Planning," *Facilities Manager,* Fall 1993.

Reynolds, Gary L. "Foundations of Leadership for Facilities Officers." *Facilities Manager,* Winter 1995.

Rush, Sean C., and Sandra L. Johnson. "Campus Facilities: A Diminishing Endowment." *Planning for Higher Education,* 18:1, 1989.

———. *The Decaying American Campus: A Ticking Time Bomb.* Alexandria, Virginia: Association of Physical Plant Administrators, 1989.

Rybcznski, Witold. "Should Campus Architecture be Art?" *Planning for Higher Education,* 21:3, 1993.

Schmidtlein, Frank A., and Toby H. Milton. "College and University Planning: Perspectives from a Nation-Wide Study." *Planning for Higher Education,* 17:3, 1989.

Sensbach, Werner. "The American Campus as a Work of Art and Utility." In *Facilities Management: A Manual for Plant Administration.* Alexandria, Virginia: Association of Physical Plant Administrators, 1989.

———. "Restoring the Values of Campus Architecture." *Planning for Higher Education,* 20:1, 1991.

———. "Continuity and Contradiction in Contemporary Campus Architecture." *Facilities Manager,* Summer 1992.

Sexton, William P. "Merging Your Goals for Excellence with he Institution's Mission." *Facilities Manager,* Winter 1989.

Smith, Marion B. "Planning for Master Planning." In *Proceedings of the 1993 Educational Conference and Annual Meeting of APPA.* Alexandria, Virginia: APPA, 1993.

Smith, Samuel H. "Educational Leadership: The Role of Facilities in Educational Excellence." *Facilities Manager,* Fall 1992.

Society for College and University Planning. 4251 Plymouth Road, Suite D, Ann Arbor, Michigan 48105-2785. Publisher of Planning for Higher Education. Provider of "SCUP's Planning Pages" on the World Wide Web; URL (Uniform Resource Locator): http://www.umich.edu/~scup/.

Turner, Paul Venable. *Campus.* Cambridge, Massachusetts: The MIT Press, 1984.

Womack, Farris W., and Richard S. Podemski. "Criteria for Effective Planning in Multi-Campus Systems." *Planning for Higher Education,* 13:2, 1985.

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